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ORAL AND WRITTEN LANGUAGE OF CHILDREN IN GRADES 4 AND 6
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THE WRITTEN AND SPOKEN LANGUAGE STRUCTURE OF FOURTH- AND SIXTH-GRADERS WAS ANALYZED TO DETERMINE THE INFLUENCE OF CERTAIN VARIABLES. DATA WERE OBTAINED FOR 300 CHILDREN WHO WERE ORGANIZED INTO 3 GROUPS--WHITE CHILDREN IN GRADES 4 AND 6, AND NEGRO CHILDREN IN GRADE 4. COMPARISONS WERE MADE BETWEEN THE LANGUAGE OF THE GROUPS, TYPES, SEX, GRADES, TEXTS, AND REGIONS. SCORES FROM A VARIETY OF MEASURING DEVICES WERE ANALYZED. THE RESULTS REVEALED THAT MOST CHILDREN USED BASIC LANGUAGE STRUCTURES, AND THAT THE LANGUAGE STRUCTURES USED BY CHILDREN ARE RELATED TO THE PURPOSES OF THE CHILDREN AND THE REGION FROM WHERE THEY COME. IT WAS CONCLUDED THAT TEXTBOOKS DO NOT USE LANGUAGE THAT IS MUCH SUPERIOR TO THE SPEECH USED BY CHILDREN. (RS)

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ORAL AND WRITTEN LANGUAGE OF CHILDREN IN GRADES 4 AND 6 COMPARED WITH THE LANGUAGE OF THEIR TEXTBOOKS

COOPERATIVE RESEARCH PROJECT NO. 2410

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Durant, Oklahoma
1965

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CHAPTER I

The Objectives and the Research Plan

PROBLEM

It is a matter of concern in our society that children do not make satisfactory development in their use of language during their school years. As long as the way of life in the United States could be described as agrarian, skill in the use of language was the concern of a select few who managed to achieve it in spite of the methods used in the schools, or because the methods used fitted their language bent. In the complicated industrial society of today, it is no longer just an educated few we need, but a total adult population which is highly verbal. For every individual, both acceleration of the acquisition of basic skills and the lengthening of the educative process are felt to be necessary if the nation is to maintain a stable economy with a minimum of unemployment.

Yet we have large numbers of pupils who are not continuing in school as long as they should, and others to whom their textbooks have become unintelligible early in the elementary grades. The traditional method of teaching language by emphasizing correctness of grammar has neither given these people the language skill they need nor fostered any interest in language in them. For the last thirty years reading textbooks for the elementary school have been designed to promote growth in vocabulary, the theory back of the design being that failure in language is primarily a failure in vocabulary. These textbooks have not made skilled readers out of children, let alone mature users of language in other ways.

More recently, the problem of how to increase skill in the use of language has centered around an attempt to discover first what the language which the child learns at home is really like, and then what developments of that language ought to occur at well-defined stages in order to enable him to find pleasure in learning. So far, we know very little about language, how it is learned, and what possibilities there are for developing it beyond the language with which the child comes to school.

A great deal is being said currently about the linguistic impoverishment of the homes from which certain children who make up the major portion of those who drop out of school come, but exactly what this impoverishment consists of is not known. Is it lack of vocabulary because children do not have experiences which will develop vocabulary? Is it children's failure to achieve a large repertoire of language structures because of an environment in which their linguistic needs are few, or because the conversational interchange between children and adults is limited by mothers and fathers who are too busy to talk to children? Or is it something more intangible, an environment in which there is a withering of the human spirit, a growth of apathy which causes atrophy of such purely human attributes as language? In the case of boys, is the impoverishment a male image which rejects the study of language as something effeminate? Perhaps it is a combination of all of these; perhaps it is something quite different from any of these.

Among the many other problems connected with language, one of concern is the failure of people who have achieved satisfactory skill in speaking and reading language to transfer this skill to their writing of language. As yet, we know little about what is involved in the transfer of oral language structures to structures of written language beyond the manual dexterity that is required in writing.

Because language has seemed to be such a natural activity of the human being, it is only now that we have become aware of how intimately language is interwoven with an individual's personality, and how many psychological factors may be involved in the substitution of a standard English for a sub-standard one. If the problems involved in teaching improved use of language are to be solved, they will be solved only after the accumulation of a large body of information about language, information which has been obtained from many individual studies of both the characteristics of language and the connection between language and certain environmental and psychological factors.

PURPOSE AND OBJECTIVES

This study is designed to analyze the structure of children's written and spoken language in the fourth and sixth grades; to ascertain the influence of certain variables such as intelligence, sex, socio-economic status of the family, education of the parents, and ethnic origin on the form of the language of these children; and to compare the results of this study with those obtained in a similar study conducted by Ruth G. Strickland of Indiana University.

The questions this research is designed to answer are the following:

1. What structures appear in the oral language used by children in the fourth and sixth grades?
2. What patterns of subordination and elaboration are added at the sixth grade level?
3. To what extent are these structures found in the language of children at each grade level as related to the variables of age, sex, intelligence, ethnic background, sibling status, certain personality traits, and the socio-economic background and education of their parents?
4. Are the patterns which children use at these grade levels found in the reading textbooks designed for these grades?

5. What relationships appear at fourth and sixth grade levels between the structure of children's oral and written language and their reading comprehension?

6. When children use written and oral language for expression in similar situations, what structural differences appear between their written and their oral language?

RELATED RESEARCH

Linguistics

With the independent development of the science of linguistics in the second decade of this century, students of language began to formulate a more precise and mathematical description of language than had been possible by using the rules of traditional grammar. While traditional grammar had been based on the written word as used in literary models, the new grammar was based on the spoken word of the common man. Most linguists now hold that the only true language is that spoken by the members of a given society in the dialogue through which they conduct the activities of that society.

As linguistic science has developed, it has become more and more apparent how complicated language is and how intricately it is interwoven with the culture of the group. New theories about language, and new ways to describe structure are constantly being advanced. As a result the science of linguistics has developed numerous branches. Of these branches, the ones with which this study will be concerned primarily are 1. Structural Linguistics and 2. Psycholinguistics.

1. Structural Linguistics

As defined by W. Nelson Francis, structural linguistics is "the kind of linguistics which is primarily interested in describing as concisely and accurately as possible the interrelationships and patterns which make up the intricate structures of language."[1] Beginning with the sounds (phones) which the human being is able to make, the structuralists have isolated the sounds used by native speakers of American English. These sounds they have further divided into sets, each of which may be designated by a single symbol. All of these symbols make an alphabet of the language. To these sets of sounds they give the name phonemes, and out of phonemes, in a regularly recurring order, morphemes (often words) are made. Out of words used systematically together, a pattern of syntax is made. These patterns of syntax may be either phrases or clauses, but we recognize them as meaning-carrying units by speaking them with an intonation pattern which is made up of stress, pitch, and juncture.

This sound pattern of language is probably the area which the structuralists have least satisfactorily defined in detail; yet as Henry Lee Smith says, "The combinations of patterns of...stresses and transitions are...the very blood and bone of English grammar."[2] Of formulas for marking the sound system of English, the Trager-Smith division into four types of stress, four of pitch, and four of juncture is the best-known. Recently, both teachers of foreign languages[3] and teachers of American English have shown themselves to be increasingly more interested in the sound patterns of English than they have been in the past. Studies in children's language indicate that native speakers do not have complete knowledge of the intonation patterns of their language,[1] and articles and books are advocating a return to reading aloud during grade-school years.[2] The grade-school curriculum is being designed so as to give more time to speech and listening activities in the language arts program.

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[1] W. Nelson Francis, The Structure of American English (New York, 1958), p. 26.

[2] "The Teacher and the World of Language," College English, XX (January, 1959), pp. 172-178.

[3] Dwight Bolinger, "Around the Edge of Language," Harvard Educational Review, XXXIV (Spring, 1964), 282-296.

A sentence in structural linguistics is the succession of sounds that occurs in the speech of an individual either between the speech of someone else and his own terminal silence, or between two terminal silences of his own. A terminal silence is a long pause, usually accompanied by a falling inflection, but not always. According to this definition, a sentence in structural linguistics may not be the same as a sentence in traditional grammar. It may consist of a single word or phrase said in answer to a question.

To describe language patterns in a mathematical manner, the structural linguists use a system of symbols. Some of the antagonism to their work may be caused by their failure to agree upon a single system of descriptive symbols. The symbols most commonly used are alphabetical or numerical. A pattern consisting of a subject and verb may be designated 12 or NP-VP depending upon the system of notation.

Among the widely used books on structural linguistics are those by Charles C. Fries, W. Nelson Francis, Harold Whitehall, and Paul Roberts. Their work was preceded by the theory of Edward Sapir and Leonard Bloomfield, among others.

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[1] Ruth G. Strickland, The Language of Elementary School Children: Its Relationship to the Language of Reading Textbooks and the Quality of Reading of Selected Children (Indiana University, 1962), p. 106.

[2] Charles C. Fries, Linguistics and Reading (New York, 1963), p. 207; Thomas F. Duffy, "Oral Reading for Its Own Sake," Elementary English, XXXXI (October, 1964), pp. 597-599.

2. Psycholinguistics

More is known about the language of the pre-school child than about the language of children of any of the other school years. Interest in child language was stimulated by such pioneering work as that of Piaget. Since Piaget, research in pre-school language has shown that the average child comes to school with an amazing ability to use his language orally. In his pre-school years, learning to communicate at home and with his playmates, he has become able to use all of the basic structures of language, and can vary them either by word order, intonation, stress, pause, use of linking words, or use of movables. Much of this skill is automatic--below the level of his consciousness--the child's language being intrinsically a part of himself like the movement of his fingers or legs. Furthermore, this pre-school language is diffuse, uneconomical, and immature.

In the field of psycholinguistics, especially as it relates to maturity of language, the most comprehensive survey in English to date is that of A. F. Watts. His book, The Language and Mental Development of Children is a study of the mental development of British children as shown through their language, but it also surveys both French and American research which had been done at the time it was written. Chapter III, "Continuous Speech," sets up stages of the development of the child which are associated with his use of certain syntactic structures. Though out-of-date in grammatical terminology, the book suggests fields for further research in children's language, and gives a large number of testing techniques. Watts thought "the use by older children of prepositional phrases and infinitive expressions as alternatives to dependent clauses explains why the increase in the percentage of clauses at the higher age-levels is not so marked as at earlier ages."

In an early study, Lou LaBrant found children's use of elements of subordination a measure of maturity in language,[1] and a recent statistical study by Kellogg W. Hunt concludes that compression is a mark of increasing maturity in children's language.[2] Studies by Edith Davis, Mary Fisher, Mary Shirley, Dorothea McCarthy and others in language development in children have been summed up by Dorothea McCarthy who says that mean sentence length is the measure of linguistic maturity which is the most "reliable, easily determined, objective, quantitative, and easily understood."[3] Twenty years after Dorothea McCarthy's first study, Mildred C. Templin, using the same methods and techniques as McCarthy and Davis, found that children were talking in longer sentences and using a larger vocabulary. She thought the increase of sentence length and vocabulary was the result of changes in life in America.[4]

In 1962, Ruth G. Strickland of Indiana University completed a study of children's oral language in which the structures of the children's speech were compared with the structures of widely used reading textbooks. Her conclusions were that children learn fairly thoroughly at an early age the basic phonological and syntactical structures of their language and are able to use these structures with great flexibility in their oral language. She also found the oral language children used to be far more advanced than the language of the books in which they are taught to read. In her study there was some evidence that children need help to recognize and understand the phonemic scheme of English.[1]

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[1] A Study of Certain Language Developments of Children in Grades Four to Twelve Inclusive. Genetic Psychology Monographs, XIV (1933), 387-491.

[2] Differences in Grammatical Structures Written at Three Grade Levels. Cooperative Research Project #1998, 1964.

[3] "Language Development in Children." In A Manual of Child Psychology edited by Leonard Carmichael (New York, 1954), pp. 492-630. .

[4] Certain Language Skills in Children (Minneapolis, 1957), p. 151. .

Written Language

There has been little research in children's written language. The state of research in this field may be inferred from the fact that after a comprehensive survey of research in written composition, Richard Braddock and others found only three studies worthy of extended discussion.[2] Their conclusion was that relatively little research of any significance had been done in written language, and that much should be done. At the time of their survey, the study of Kellogg Hunt had not been completed. One recent study showed that in 200 papers randomly selected from those of 1,065 children in Grades 3 through 6, children of higher socio-economic groups did better in almost every factor studied.[3] In another study, when the percent of different kinds of sentences was calculated for each grade, it was found that simple sentences decreased and compound and complex sentences increased at the higher grade levels.[4] Whether such increase shows maturity of writing or not is debatable. Before much decision can be made about the maturity of children's written language, norms of adult written language need to be established. A step in that direction was taken by Hook and Mathews when they took fifty nonfiction passages of about one thousand words each from American newspapers, magazines, and books printed between 1945 and 1953 and analyzed them to establish percentages of use of the elements of grammar.[1]

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[1] *Op. cit.*, p. 106.

[2] Richard Braddock, Richard Lloyd-Jones and Lowel Schoel, *Research in Written Composition* (Champaign, Illinois, 1963) National Council of Teachers of English.

[3] Jack McClellan, "Creative Writing Characteristics of Children." Unpublished Ed.D. dissertation, (University of Southern California, 1956).

[4] M. V. Bear, "Children's Growth in the Use of Written Language," *Elementary English Review*, XVI (1939), 312-319.

A further step toward development of norms is the standard corpus of edited present-day American English which has just been completed at Brown University under the supervision of W. Nelson Francis.[2] Christensen has set up a table of percentages of use of various types of sentence beginnings in adult writing.[3]

The exact relation of written language to oral language is still to be established. Vygotsky considered written speech a separate linguistic function, differing from oral speech in both structure and mode of function. Writing, he says, is speech without an interlocutor and is addressed to an imaginary person or to no one in particular. The motives for writing are more abstract, more intellectualized, further removed from our immediate needs. His studies show that it is the abstract quality of written language that is the main stumbling block to writing.[4]

Circumstances surrounding oral expression and those surrounding written expression affect the output of both is the opinion of John Anderson.[1] He considers the first noteworthy contrast to be one of quantity. The child has frequent experiences with oral language, but his experiences with written language are few. As might be expected from this, his rate of acquisition of oral language is rapid, of written is slow. When a child is learning to speak, he is encouraged; on the other hand, when he is learning to write, he is frequently criticized. When a child speaks, his relation to the person to whom he speaks is that of person to person, but when he writes, his relation to the person for whom he writes is that of child to teacher.

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[1] Modern American Grammar and Usage (New York, 1956), pp. 76-94.

[2] For an account of this project, see W. Nelson Francis, "A Standard Corpus of Edited Present-Day American English," College English, XXVI (January, 1965), 267-273.

[3] Francis Christensen, "Notes Toward a New Rhetoric," College English XXV (October, 1963), 7-11.

[4] L. S. Vygotsky, Thought and Language (Cambridge M.I.T., 1962), pp. 98-99.

Alvina Burrows has shown that all forms of written communication are improved when they are preceded by a series of oral activities during which children have many opportunities to talk about what they are going to write about. Her research and that of others has suggested that the quality of children's writing is determined by the quality of the oral language they use.[2] Loban has also suggested that children who are more proficient in language development are significantly more successful in writing. At the present time, two parts of Walter Loban's longitudinal study of children's written and oral language have been completed. He has used both structural and transformational methods of analysis of language besides more subjective methods. He found "those subjects who proved to have the greatest power over language...were the subjects who most frequently used language to express tentativeness. Supposition, hypothesis, and conditional statements occur much less frequently in the language of those subjects lacking skill in language."[1] He did not find differences in structural patterns notable, but found that very important differences occurred in the dexterity with which subjects used elements within structures.

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[1] "Principles of Growth and Maturity in Language," Elementary English Review, XVIII (1941), 250-254.

[2] Alvina Burrows, et. al. They All Want to Write.(Englewood Cliffs, New Jersey, 1962).

Language of Negroes

Because part of the population sample for this study will be a hundred Negro pupils of Grade 4, research into the characteristics of the speech of the American Negro is pertinent. In 1951, Raven I. McDavid, Jr. and Virginia McDavid surveyed what had been done and was being done at that time to describe the speech of the Negro in the United States. They began with the premise that any scholar studying American Negro speech "must dispose of two widely held superstitions: (1) he must indicate that there is no speech form identifiable as of Negro origin solely on the basis of Negro physical characteristics; (2) he must show that it is probable that some speech forms of Negroes--and even of some Caucasians--may be derived from an African cultural background..."[2] Earlier, Krapp had given as his opinion that the Negro spoke English of the same kind as the English of the descendants of the first settlers at Jamestown and Plymouth; but Lorenzo D. Turner found that an investigation of Gullah speech disclosed several thousand items presumably derived from the languages of the parts of Africa from which the slaves were taken. In connection with other studies, random characteristics of the speech of Negroes have been tabulated, especially in the collection of data for the Linguistic Atlas of the United States and Canada (South Atlantic records).

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[1] The Language of Elementary School Children (Champaign, Illinois, 1963) The National Council of Teachers of English. p. 53.

[2] "The Relationship of the Speech of American Negroes to the Speech of Whites," American Speech, XXVI (February, 1951), 3-17.

In a more recent article, Raven McDavid, Jr. cites the need to sample more deeply the speech of the underprivileged minorities, so that it will be possible to set up a teaching program "to emphasize those features of speech most strongly disapproved by the dominant culture..."[1]

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[1] "American Social Dialects," College English, XXVI (January, 1965), 254-260.

CHAPTER II

Procedure
Including Description of the Population Sample and Results of Testing

This research was designed to allow the following comparisons:

1. Comparison between the language of children of Grade 4 and children of Grade 6.
2. Comparison between language of Negro and Caucasian children of the same grade.
3. Comparison between children's written language and their oral language.
4. Comparison between the language used by boys and that used by girls of the same grade.
5. Comparison between children's written and oral language and the language of their reading textbooks.
6. Comparison of the oral language of children of a southwestern geographical area with those of a middlewestern area.

Since the language of the reading textbooks to be examined was largely narrative, the scheme for obtaining the oral and written samples of children's language was a method which would evoke narration. Objections to this method of getting oral language will be discussed later. In order to insure as far as possible the same conditions under which data were obtained, a single investigator administered all tests, supervised the writing to obtain the written language sample, and recorded and transcribed all the oral language. The teachers of the thirteen classes of children making up the population sample assumed responsibility for collecting data about the pupils' ages, socio-economic background, sibling status, and ethnic origin, and the education of their fathers and mothers.

THE POPULATION SAMPLE

To get a population sample representative of a southwestern area hitherto unstudied in this kind of research, 300 children were taken from six communities within a radius of seventy miles of Southeastern Oklahoma State College. These communities were of three classes by population: Class 1, over 10,000 inhabitants; Class 2, between 5,000 and 6,000 inhabitants; and Class 3, under 1,000 inhabitants. No attempt was made to insure an exactly equal number of pupils from each type of school. All the pupils of a single grade in one classroom participated in the study except for one child considered unteachable in a public school situation. Pupils did, however, eliminate themselves from being included in the final study by being absent at the time of tests and at the time language samples were being taken, or by moving to another locality during the school year.

At the beginning of the study there were 114 pupils of Caucasian Grade 4, 107 of Negro Grade 4, and 110 of Caucasian Grade 6. When all the data had been obtained, there were essential data for 100 pupils from each of the three groups. There was a loss of twice as many pupils of Caucasian Grade 4 as of Negro Grade 4. No Negro family moved during the time of the study, but several Caucasian families did. In this study, then, the Negroes are not as mobile as the Caucasians, a fact partially explained by the large number of families on Welfare and the low job status of Negro children's fathers. For Caucasian Grade 4 and Caucasian Grade 6, the division of pupils by type of school was Type 1: 50; Type 2: 24; and Type 3: 26. For Negro Grade 4, the division was Type 1: 37; Type 2: 37; and Type 3: 26. The size of classes for Negro children was larger than average in schools of Type 1 and Type 2, and smaller than average in Type 3.

The distribution of pupils in Grade 4 by chronological age shows Negro boys ranging widely in age, and, in general, older than other pupils of the fourth grade.

Table 1. DISTRIBUTION OF PUPILS IN GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY SEX AND CHRONOLOGICAL AGE

C. A. in Months	Grade					
	Negro 4		Caucasian 4		Caucasian 6	
	Boys	Girls	Boys	Girls	Boys	Girls
110-115	7	15	16	11		
116-121	15	25	24	15		
122-127	13	9	18	14		
128-133	1	7	1	0		1
134-139	4	0	0	0	16	20
140-145	2	0	1	0	17	16
146-151	1	1	0	0	6	11
152-157					3	2
158-163					2	3
164-169					2	
170-175					1	

Placing the families of the children into categories according to socio-economic status was one of the most difficult problems of this study. First, most of the families were roughly fitted into the seven categories of the Minnesota Scale for Paternal Occupations. Since many of the children in this area were from homes in which there was only one parent, most often the mother, and also, as had been expected at the time the study was set up, many were from families whose sole income came from Welfare agencies, a division, Category 0, was added to the Minnesota Scale for Parental Occupations. Category 0 included all families for which the occupation of the father was unknown whether because the father did not work or because he was non-existent. In some cases, he may have been only legally non-existent. After all the fathers of the children were classified into the categories of the

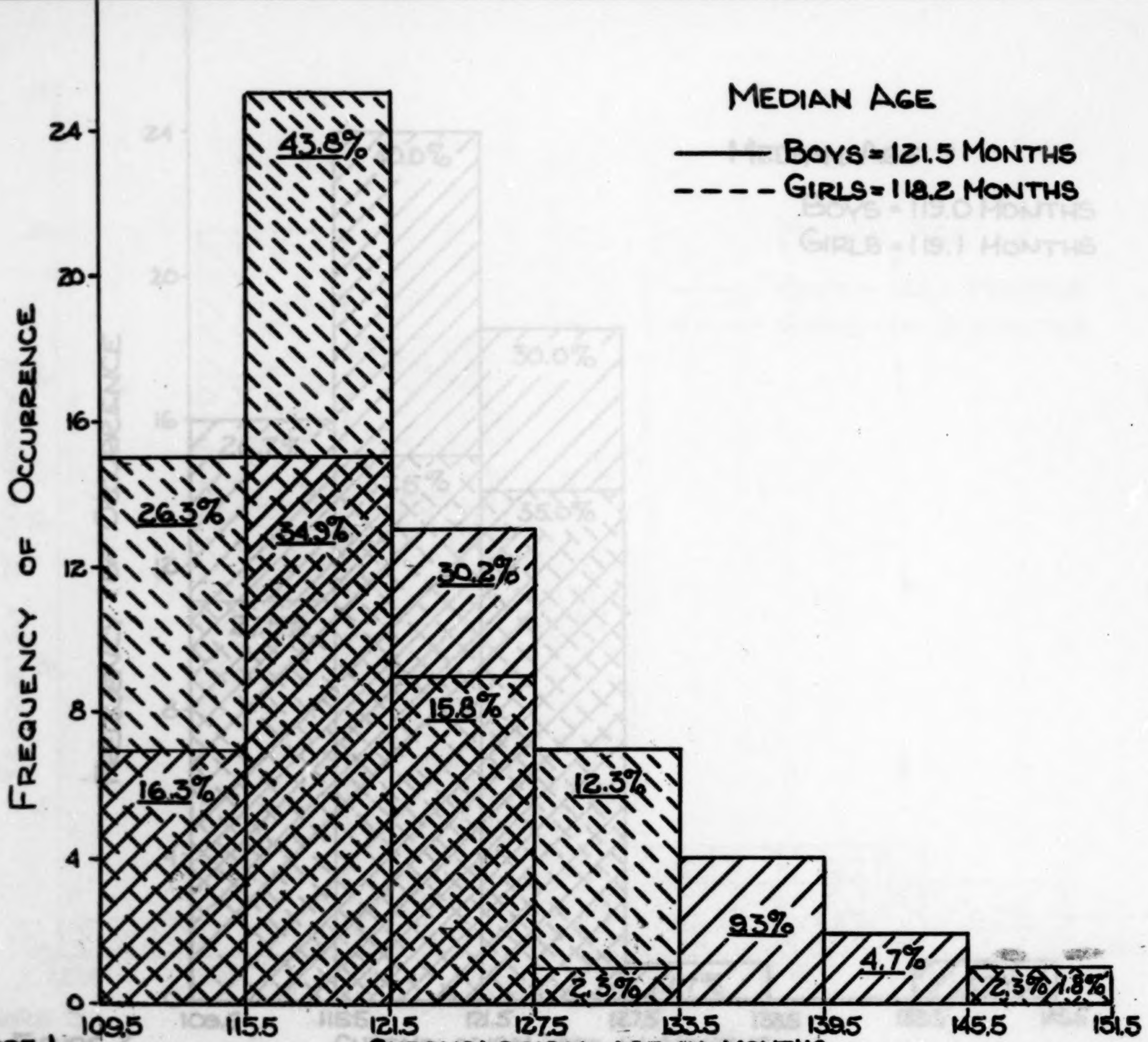

FIGURE 1,
HISTOGRAM SHOWING RELATIVE FREQUENCY & PERCENTAGES WITHIN AGE CATEGORIES FOR NEGRO 4TH GRADERS,

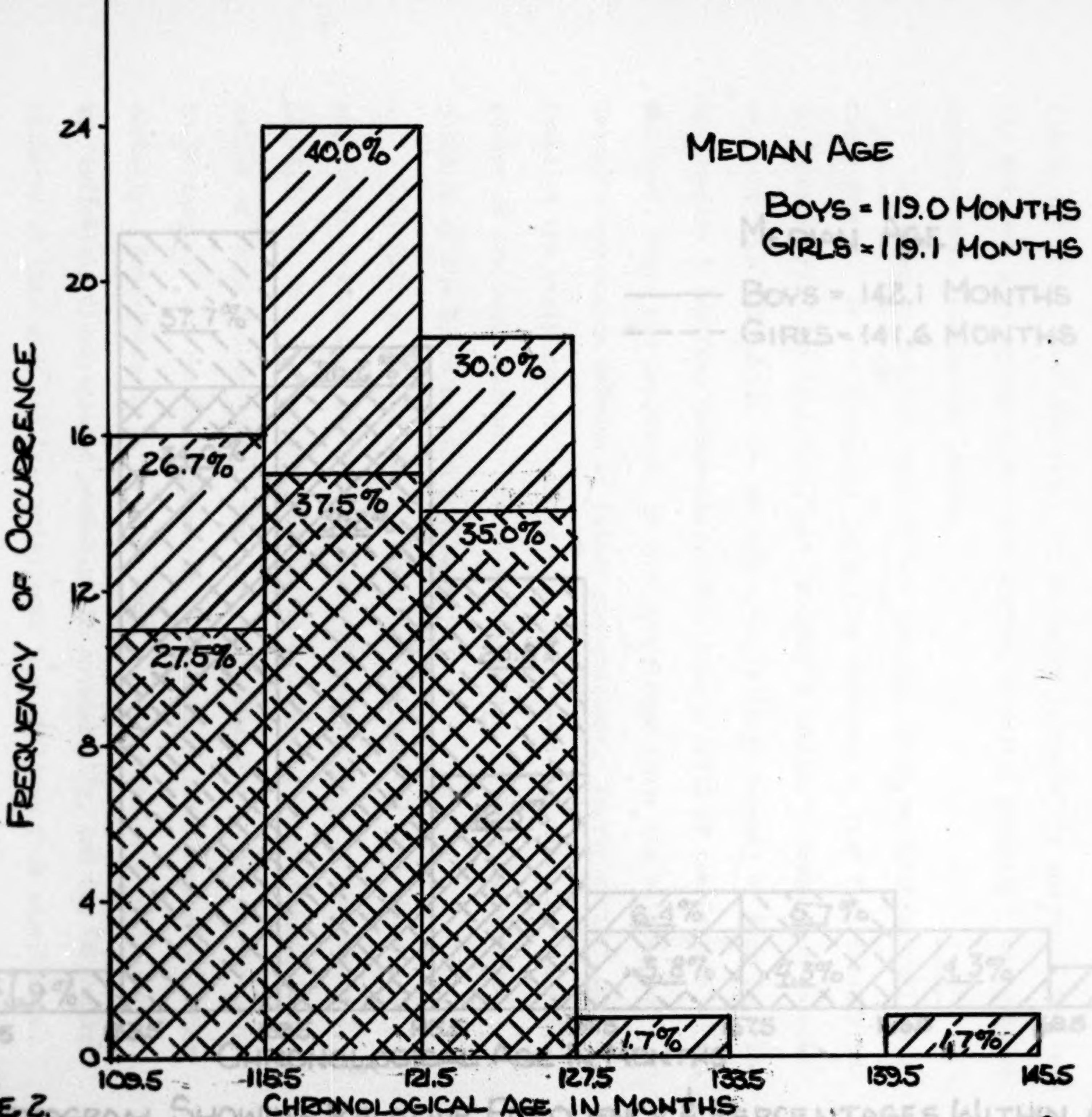

FIGURE 2.
HISTOGRAM SHOWING RELATIVE FREQUENCY & PERCENTAGES WITHIN AGE CATEGORIES FOR CAUCASIAN 4TH GRADERS

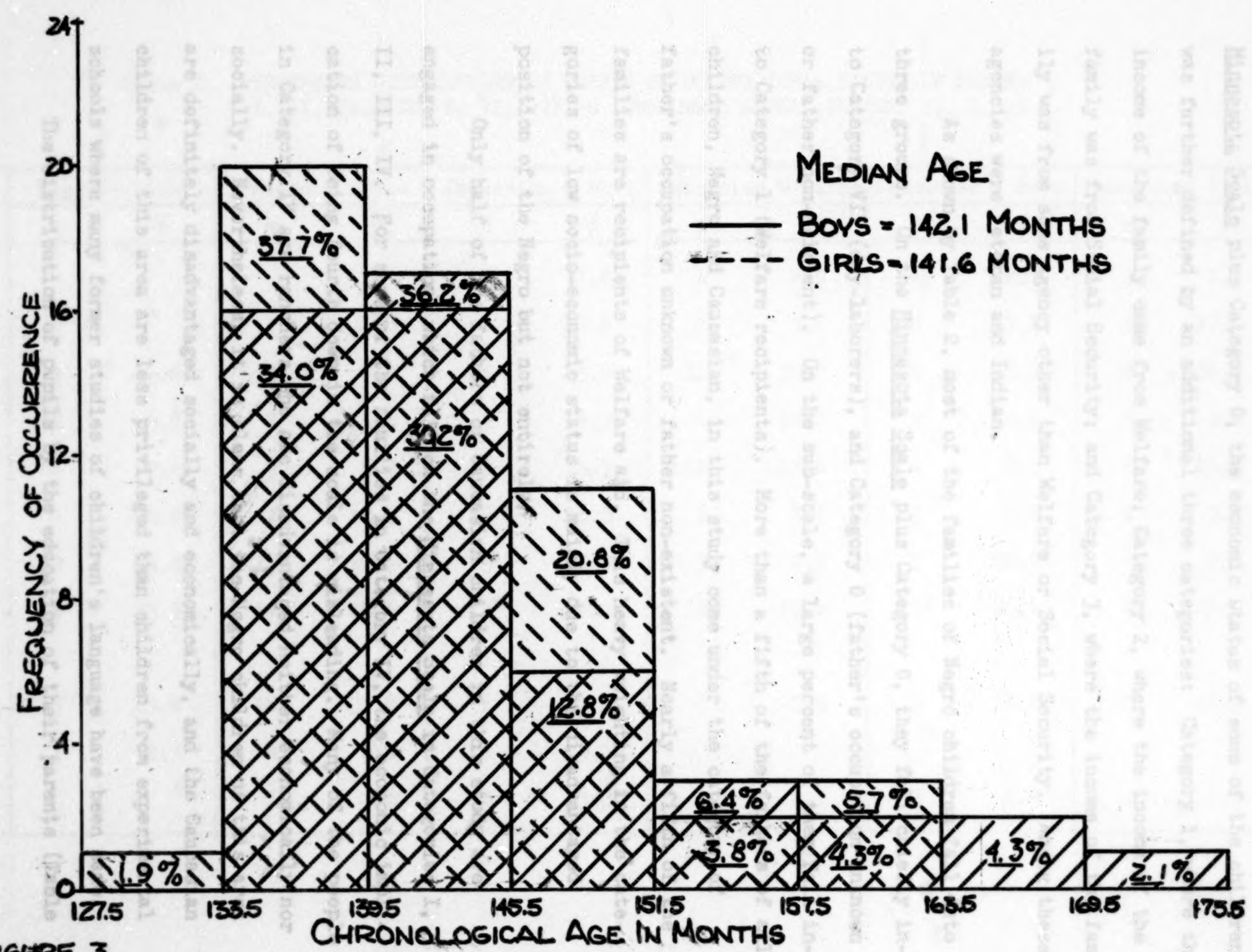

FIGURE 3.

HISTOGRAM SHOWING RELATIVE FREQUENCY & PERCENTAGES WITHIN AGE CATEGORIES FOR CAUCASIAN 6TH GRADERS

Minnesota Scale plus Category 0, the economic status of some of the children was further defined by an additional three categories: Category 1, where the income of the family came from Welfare; Category 2, where the income of the family was from Social Security; and Category 3, where the income of the family was from some agency other than Welfare or Social Security. Among these agencies were Veteran and Indian.

As shown by Table 2, most of the families of Negro children fall into three groups. On the Minnesota Scale plus Category 0, they fall chiefly into Category VII (day-laborers), and Category 0 (father's occupation unknown or father non-existent). On the sub-scale, a large percent of them fall into Category 1 (Welfare recipients). More than a fifth of the fathers of all children, Negro and Caucasian, in this study come under the category of father's occupation unknown or father non-existent. Nearly a fifth of the families are recipients of Welfare aid. This heavy weighting in the categories of low socio-economic status is mainly due to the disadvantaged position of the Negro but not entirely.

Only half of the fathers of Caucasian children in this study are engaged in occupations which fall on the Minnesota Scale in Categories I, II, III, IV. For some of the families in Category IV, the economic implication of being fourth down in the scale is misleading. Many of the people in Category IV are ranchers who are disadvantaged neither economically nor socially. Nevertheless, it is clear that the Negro children of this area are definitely disadvantaged socially and economically, and the Caucasian children of this area are less privileged than children from experimental schools where many former studies of children's language have been made.

The distribution of pupils by the education of their parents (Table

Table 2. PERCENTAGE DISTRIBUTION OF PUPILS BY OCCUPATIONAL STATUS OF FATHER I, II, III, IV, V, VI, VII, 0 (UNKNOWN); AGENCY SUPPORT (1, 2, 3)

	Negro 4 Boys		Negro 4 Girls		Caucasian 4 Boys		Caucasian 4 Girls		Caucasian 6 Boys		Caucasian 6 Girls	
	n	%	n	%	n	%	n	%	n	%	n	%
I					1	1.6	1	2.5	1	2.1	1	1.9
II			1	1.8	6	10.0	2	5.0	9	19.1	9	17.0
III	2	4.6	2	3.5	15	25.0	12	30.0	9	19.1	14	26.4
IV	3	6.9	3	5.3	5	8.3	4	10.0	5	10.6	5	9.4
V	4	9.2	3	5.3	8	13.3	10	25.0	4	8.5	8	15.1
VI	3	6.9	7	12.3	8	13.3	1	2.5	3	6.4	2	3.8
VII	17	39.2	27	47.4	5	8.3	3	7.5	5	10.6	5	9.4
0	14	23.7	14	24.6	12	20.0	8	20.0	11	23.4	9	17.0
1	15	25.4	18	31.6	6	10.0	3	7.5	5	10.6	10	19.9
2	1	2.3	4	7.0	2	3.3						
3			1	1.8	2	3.3	1	2.5	3	6.4	1	1.9

3) shows that half the fathers of Negro boys have not attended school beyond the eighth grade, and one-fourth of them have not gone beyond the fourth. The education of their mothers is greater, but only one mother has gone beyond high school, and nearly a third of the mothers have not gone beyond the eighth grade. Considerably more than half of the fathers of Negro girls have not gone to school beyond the eighth grade, and more than a fourth of them have not gone beyond the fourth grade. No mothers of Negro girls have less than a fifth-grade education, but none of them have done graduate work.

One-sixth of the Caucasian boys of Grade 4 have fathers who have not gone to school more than four years; while only three of the mothers of these boys have been to school as little as four years. About the same number of mothers and fathers of Caucasian boys have graduated from college or have attended college. Caucasian girls of Grade 4 show the best record of parental education of any of the groups, a fact that may help explain their superior achievement on some tests. Though the number of their parents who did not graduate from high school is still greater than the number who did, one-fourth of their fathers have graduated from high school and almost half of their mothers have. For this group equality of the amount of education of father and mother is greater than for any other group except Caucasian boys of Grade 6. At the graduate level, the amount of education of the fathers of sixth-grade pupils is greater than that of their mothers.

The most significant aspect of Table 3 for this study is the superiority of the education of the mother over the education of the father for most children. It is possible that inferior education of fathers produces a male image antipathetic to education. Such a male image may partially explain the low achievement of some boys in language and their early dropping out

Table 3. DISTRIBUTION OF PUPILS IN GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY EDUCATION OF PARENTS

Years of	Negro 4 Boys		Negro 4 Girls		Caucasian 4 Boys		Caucasian 4 Girls		Caucasian 6 Boys		Caucasian 6 Girls	
Education	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers	Mothers
0–4	11	4	17		11	3	9	3	11	6	15	5
5–8	14	14	21	18	16	10	8	8	12	14	7	8
9–11	7	11	9	21	8	15	5	5	4	4	5	11
12	7	13	8	14	11	19	10	17	10	13	9	14
13–15	2		1	3	7	7	4	5	5	8	8	10
coll.*	1		1	1	6	6	3		2	2	3	3
grad.*	1	1			1		1	2	3		6	2

*The abbreviation coll. means college graduate; grad. means attended graduate school.

of school. Sixth-grade boys of this study seem to excel girls of their grade in many aspects of language, a superiority which may be partially due to the fact that many of their fathers are better-educated than their mothers.

Only 17 out of the 600 parents of children in this study have reached graduate level in school. Only 45 of the 600 have graduated from college, and only 105 have attended college, in spite of the fact that 75 of the pupils are from a town in which a college is located.

Table 4. DISTRIBUTION OF PUPILS OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY NUMBER OF SIBLINGS

Number of Siblings	Grade 4				Grade 6	
	N. Boys	N. Girls	C. Boys	C. Girls	C. Boys	C. Girls
0	2	6	3	4	4	2
1	5	4	14	9	5	15
2	1	9	20	13	15	12
3	9	11	12	5	4	10
4	6	6	2	5	7	7
5	6	7	5	2	2	1
6	3	3	0	0	5	4
7	4	4	2	1	2	1
8	4	4	0	0	0	1
9	3	3	2	1	3	0

The number of siblings of children in this study is much higher than the national average. More than a third of these children are members of a family in which there are five or more children. Whereas Caucasian children tend to come from families who have less than four children, many Negro children come from families with four to nine children. Some research has indicated that lone children have an advantage in use of language because their early years are spent in much conversation with adults. If that is true, all of the children in this study but 21 are disadvantaged. It is possible, however, that the disadvantage in use of language which siblings cause is compensated for after the number of siblings is so great that young children have brothers and sisters old enough to furnish a language environment which is mature or near-mature. The number of siblings may also cease to be a disadvantage in homes where the income is so low that the family furnishes its own entertainment largely through conversation with one another and neighbors.

TESTING

Mental Maturity.

The first test to be administered was The California Short-Form Test of Mental Maturity, Elementary S-Form. Though this particular test had not customarily been given in any of the schools, pupils in Class 1 and Class 2 communities were accustomed to a regular testing program. Children of Class 3 communities in this study had never been tested with standardized tests. This test of mental maturity produces a total intelligence score which is based on combined scores of verbal and non-verbal intelligence. The distribution of the pupils of this study according to their total intelligence, as shown in Table 5, covers a range from one child in the 50 to 59 slot to two children in the 140 to 149 slot. Both Negro boys and girls score lower than Caucasian boys and girls of the same grade.

The distribution by verbal intelligence, Table 6, shows the scores of Negro boys and girls skewed to the lower levels in about the same fashion as their scores for total intelligence. Negro girls are superior to Negro boys in verbal intelligence. In general, the scores of boys on these tests tend to stretch out to either extreme and to present a more erratic picture than the scores of girls do. At the fourth-grade level girls are generally superior to boys in verbal intelligence, but at the sixth-grade level boys excel girls in the top ranges. In non-verbal intelligence, Negro boys and

Table 5. DISTRIBUTION OF PUPILS IN GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY TOTAL INTELLIGENCE

Total Intelligence Quotient	GRADE						Totals		
	Negro 4		Caucasian 4		Caucasian 6				
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	All
050-059	1						1		1
060-069	2		1				3		3
070-079	3	6		1	2	3	5	10	15
080-089	10	12	9	2	5	3	24	17	41
090-099	13	14	11	4	10	16	34	34	68
100-109	12	17	18	11	10	13	40	41	81
110-119	2	8	14	13	6	13	22	34	56
120-129			6	6	8	3	14	9	23
130-139			1	2	6	1	7	3	10
140-149				1		1		2	2

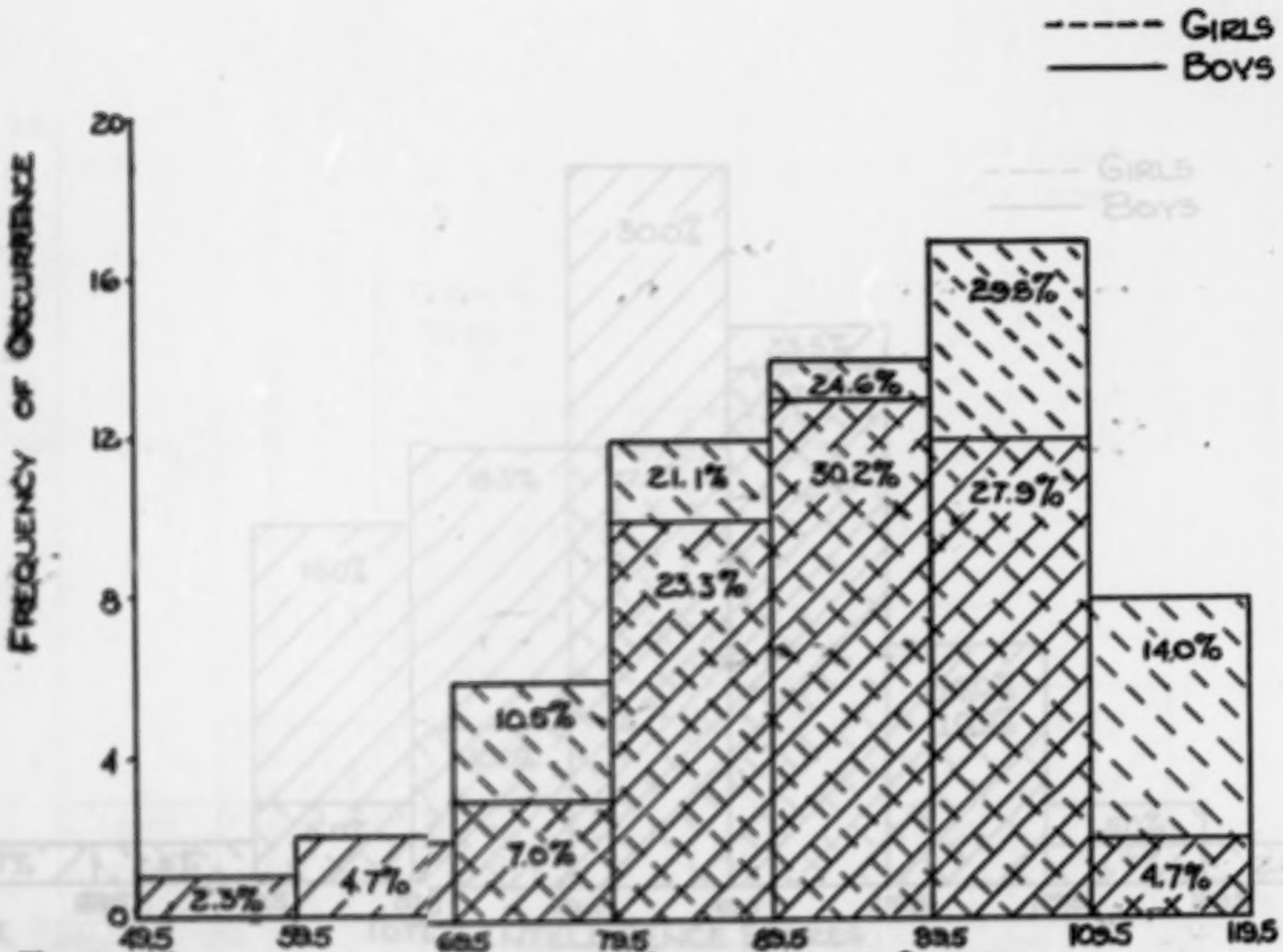

FIGURE 4.

TOTAL INTELLIGENCE SCORES

HISTOGRAM SHOWING RELATIVE FREQUENCIES & PERCENTAGES OF TOTAL INTELLIGENCE CATEGORIES FOR 4TH GRADE NEGRO STUDENTS

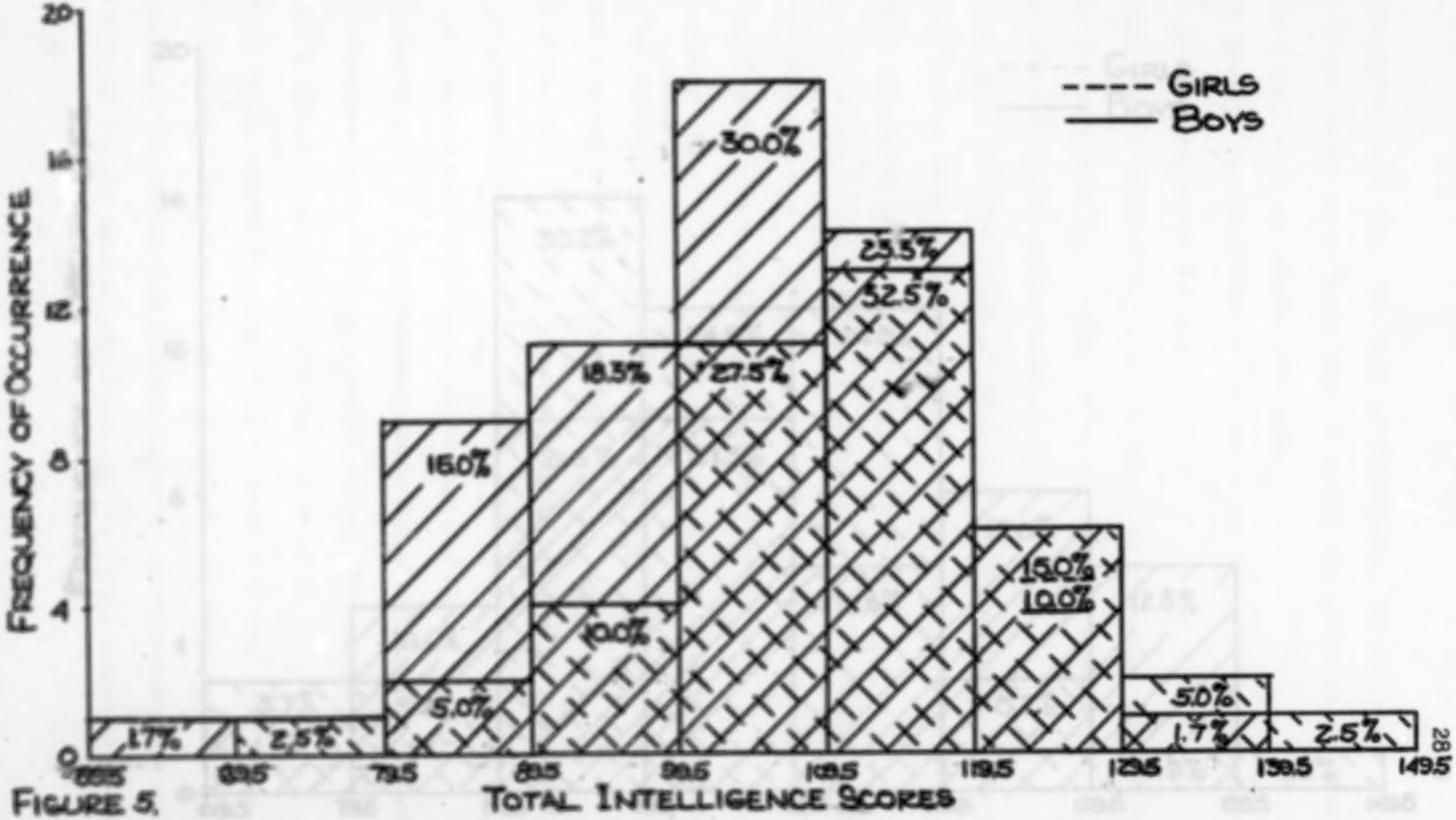

FIGURE 5.

HISTOGRAM SHOWING RELATIVE FREQUENCIES & PERCENTAGES FOR TOTAL INTELLIGENCE INTERVALS FOR 4TH GRADE CAUCASIAN CHILDREN

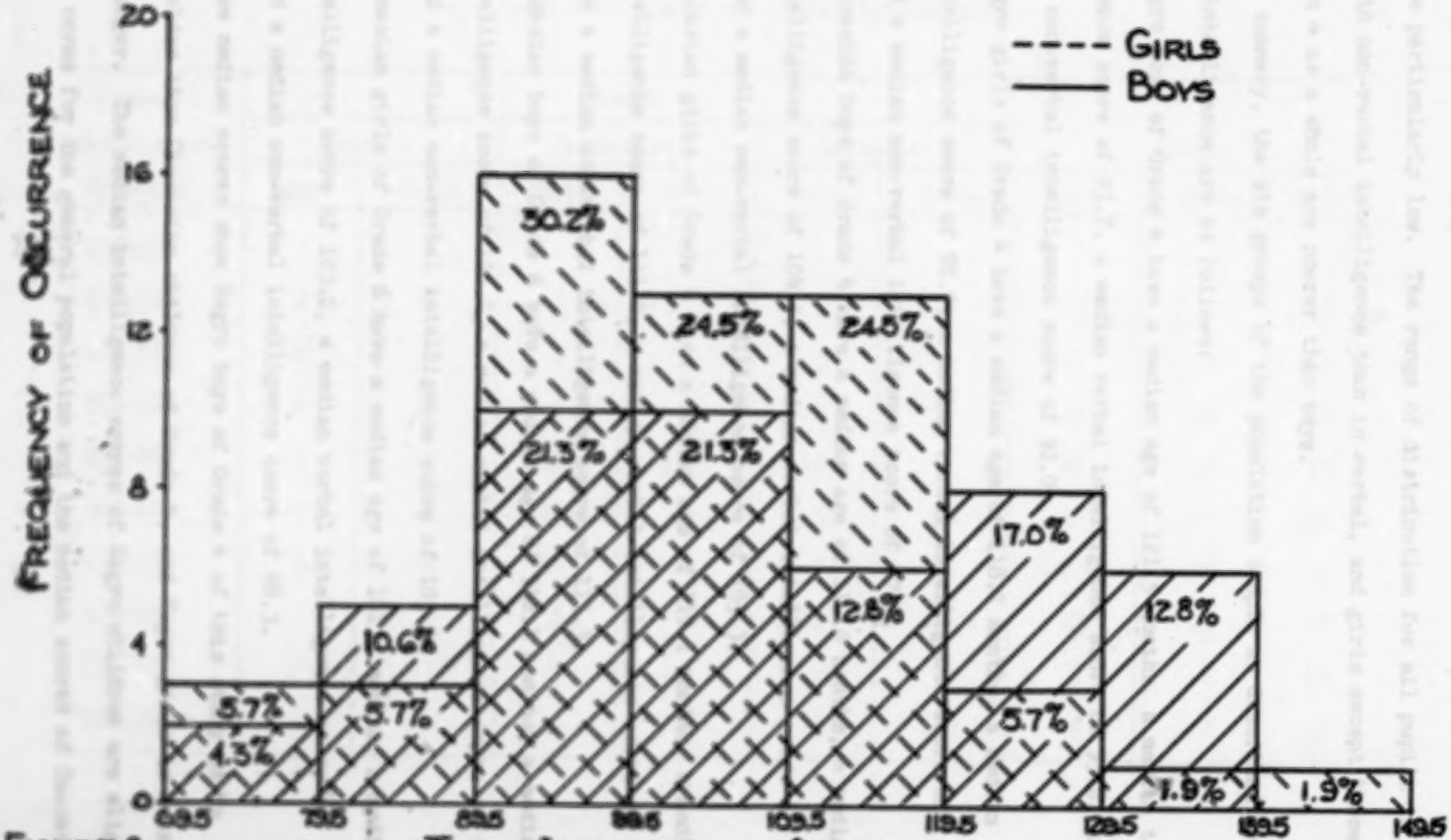

FIGURE 6. HISTOGRAM SHOWING RELATIVE FREQUENCIES & PERCENTAGES FOR TOTAL INTELLIGENCE INTERVALS FOR 6TH GRADE CAUCASIAN CHILDREN

girls are particularly low. The range of distribution for all pupils is much broader in non-verbal intelligence than in verbal, and girls except those of Caucasian 4 as a whole are poorer than boys.

In summary, the six groups of the population sample as described by age and intelligence are as follows:

Negro boys of Grade 4 have a median age of 121.5 months, a median total intelligence score of 93.7, a median verbal intelligence score of 95.2, and a median non-verbal intelligence score of 92.0.

Negro girls of Grade 4 have a median age of 118.2 months, a median total intelligence score of 92.0, a median verbal intelligence score of 96.9, and a median non-verbal intelligence score of 87.9.

Caucasian boys of Grade 4 have a median age of 119.0 months, a median total intelligence score of 104.5, a median verbal intelligence score of 103.5, and a median non-verbal intelligence score of 105.3.

Caucasian girls of Grade 4 have a median age of 119.1 months, a median total intelligence score of 111.0, a median verbal intelligence score of 114.0, and a median non-verbal intelligence score of 111.3.

Caucasian boys of Grade 6 have a median age of 142.1 months, a median total intelligence score of 106.0, a median verbal intelligence score of 118.5, and a median non-verbal intelligence score of 105.0.

Caucasian girls of Grade 6 have a median age of 141.6 months, a median total intelligence score of 103.0, a median verbal intelligence score of 104.1, and a median non-verbal intelligence score of 98.3.

These median scores show Negro boys of Grade 4 of this study to be slightly older than Caucasian children of Grade 4, and Negro girls to be a little younger. The median intelligence scores of Negro children are slightly below the norms for the general population and the median scores of Caucasian

Table 6. DISTRIBUTION OF PUPILS IN GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY VERBAL INTELLIGENCE

Verbal Intelligence Quotient	GRADE						Totals		
	Negro 4		Caucasian 4		Caucasian 6				
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	All
050-059									
060-069	3		2				5		5
070-079	4	3	2		5	2	11	5	16
080-089	6	6	6	1	4	5	16	12	28
090-099	15	17	15	6	10	10	40	33	73
100-109	11	19	12	8	5	14	28	41	69
110-119	3	10	14	11	5	11	22	32	54
120-129	1	2	5	8	11	3	17	18	35
130-139			4	5	5	2	9	7	16
140-149				1	2	1	2	2	4

Table 7. DISTRIBUTION OF PUPILS IN GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 BY NON-VERBAL INTELLIGENCE

Non-verbal Intelligence Quotient	GRADE						Totals		
	Negro 4		Caucasian 4		Caucasian 6				
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	All
050-059	5	1					5	1	6
060-069	2	7	1	1		2	3	10	13
070-079	3	4	3	1	2	4	8	9	17
080-089	9	11	8	2	4	10	21	23	44
090-099	10	16	11	8	12	12	33	36	69
100-109	12	9	12	6	10	12	34	27	61
110-119	2	6	16	11	9	7	27	24	51
120-129		3	8	8	4	2	12	13	25
130-139			1	1	5	3	6	4	10
140-149				1	1	1	1	2	3
150-150				1				1	1

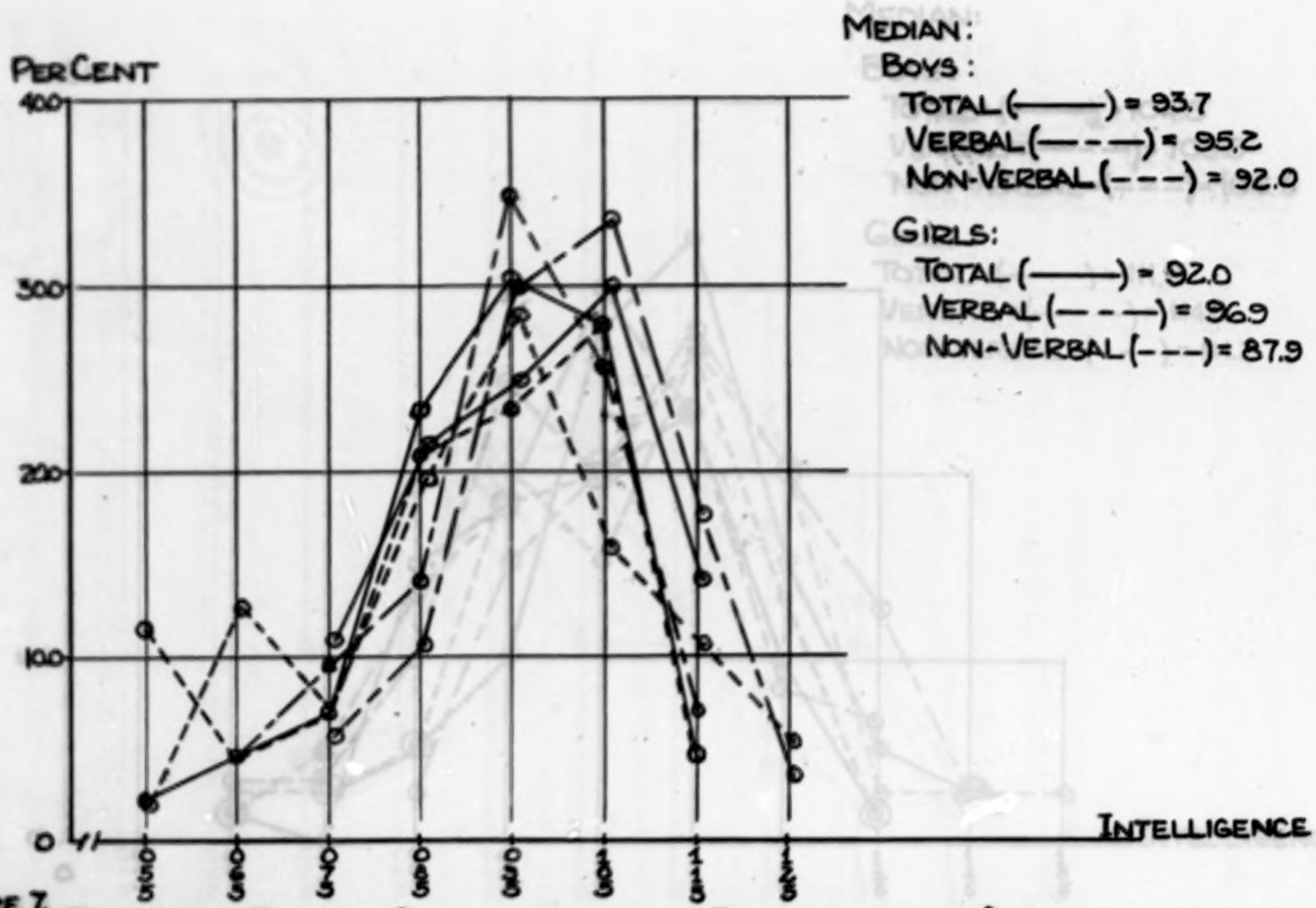

FIGURE 7. FREQUENCY POLYGON SHOWING RELATIVE PERCENTAGE OF GROUP COMPOSITION FOR THE FACTORS OF TOTAL INTELLIGENCE, VERBAL INTELLIGENCE AND NON-VERBAL INTELLIGENCE FOR 4TH GRADE NEGRO STUDENTS

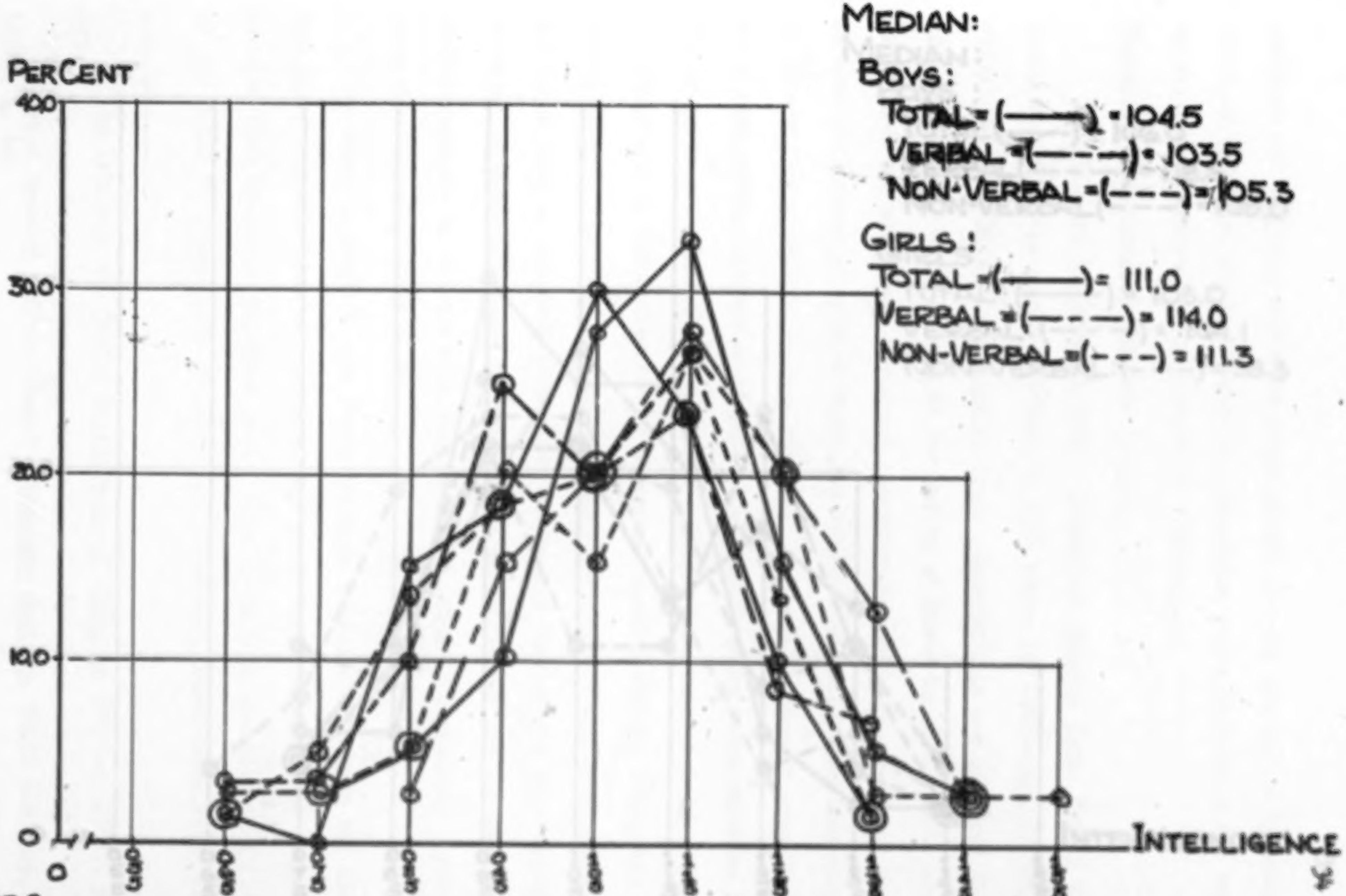

FIGURE 8. FREQUENCY POLYGON SHOWING RELATIVE PERCENTAGE COMPOSITION OF CAUCASIAN 4TH GRADE STUDENTS BY SEX FOR TOTAL, VERBAL & NON-VERBAL INTELLIGENC

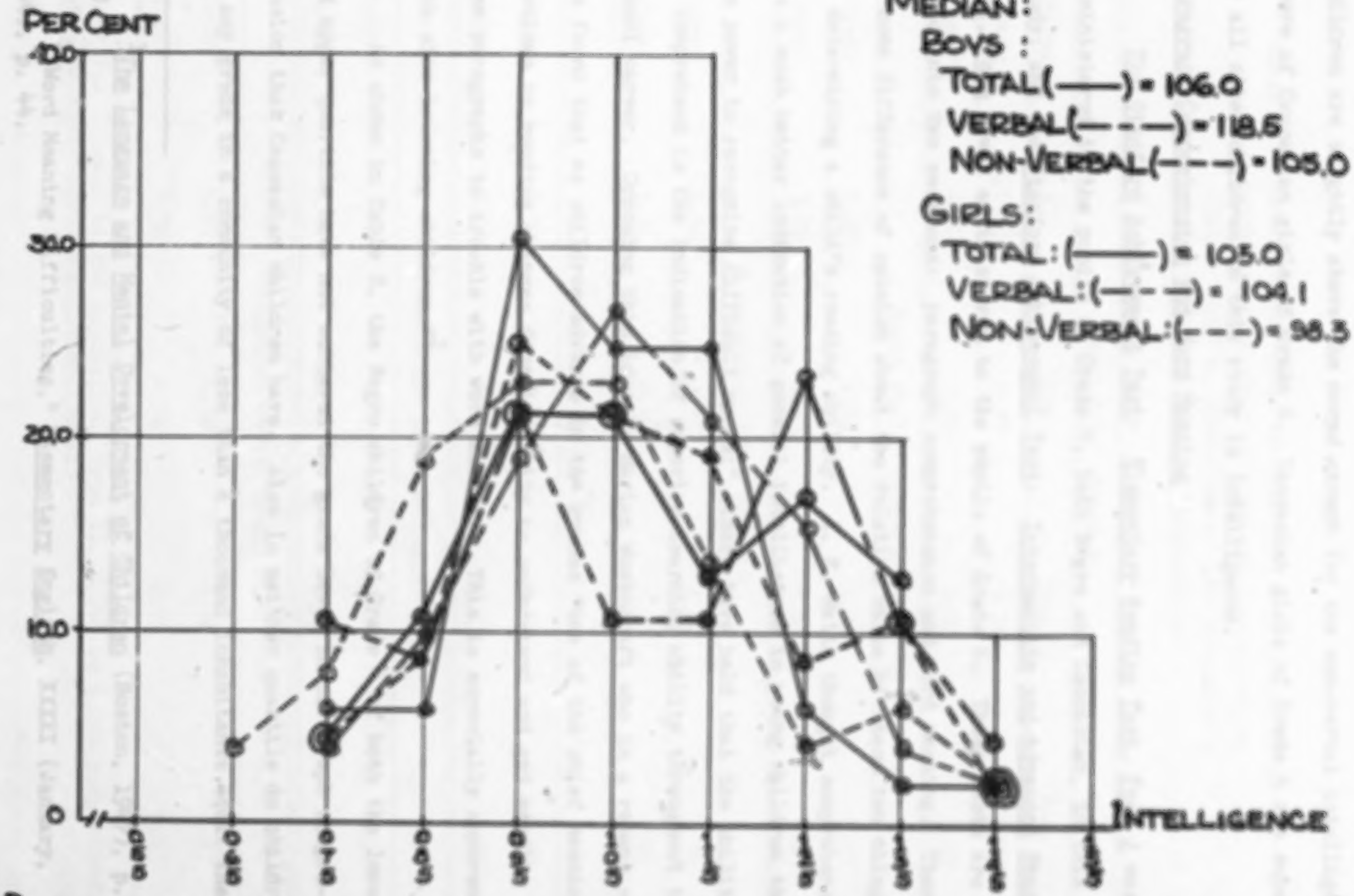

FIGURE 9. FREQUENCY POLYGON SHOWING RELATIVE PERCENTAGE COMPOSITION OF CAUCASIAN 6TH GRADE STUDENTS BY SEX FOR TOTAL, VERBAL & NON-VERBAL INTELLIGENCE

children are slightly above the norms except for the non-verbal intelligence score of Caucasian girls of Grade 6. Caucasian girls of Grade 4 are superior to all other children in this study in intelligence.

Paragraph Comprehension and Word Meaning

The Stanford Achievement Test: Elementary Reading Test, Form J was administered to the pupils of Grade 4, both Negro and Caucasian, in this study; and the *Stanford Achievement Test: Intermediate and Advanced Reading Test, Form J* was administered to the pupils of Grade 6. These tests are divided into two sections: paragraph comprehension and word meaning. There is some difference of opinion about the relative value of these two things in determining a child's reading ability. A. F. Watts thought comprehension was a much better indication of general intelligence in young children than the power to recognise difficult words;[1] others have held that the ability to comprehend is the indication of superior learning ability throughout the school career. Opposing this idea is Marian Mosencraft who in a recent study has found that as children advance in the grades "one of the chief meaning problems in reading changes from inability to understand and get meaning from paragraphs to trouble with word meaning. This is especially apparent with slow learning children."[2]

As shown in Table 8, the Negro children of Grade 4 of both the lower and upper quartile have not achieved the grade level in paragraph comprehension that Caucasian children have. Also in neither quartile do children of any grade in a community of less than a thousand inhabitants equal the

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[1] *The Language and Mental Development of Children* (Boston, 1947), p. 103.

[2] "Word Meaning Difficulties," *Elementary English*, XXXXI (January, 1964), p. 44.

Table 8. AVERAGE GRADE LEVEL IN PARAGRAPH COMPREHENSION ON SILENT READING TEST OF HIGH AND LOW QUARTILES, GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6, IN THREE TYPES OF COMMUNITIES*

Average	All	Type I	Type II	Type III
Negro Boys Grade 4				
Lower	2.12	2.77	2.30	1.85
Upper	4.51	5.23	4.00	3.58
Negro Girls Grade 4				
Lower	2.17	2.97	1.88	2.27
Upper	5.06	4.43	4.60	3.93
Caucasian Boys Grade 4				
Lower	2.69	3.47	2.77	2.34
Upper	6.36	6.91	5.23	4.86
Caucasian Girls Grade 4				
Lower	3.31	3.80	3.43	2.90
Upper	7.03	7.36	6.33	5.60
Caucasian Boys Grade 6				
Lower	3.82	5.68	4.67	3.13
Upper	9.90	10.53	9.23	6.00
Caucasian Girls Grade 6				
Lower	4.01	4.70	4.68	2.87
Upper	9.30	9.74	9.76	6.63

*Type I, over 10,000 population; Type II, 5,000 to 6,000 population; Type III, under 1,000 population (rural).

achievement of children of larger communities. In paragraph comprehension, there is a suggestion of superiority of boys to girls in the upper quartile of Grade 6, both in the general average and the average for schools in communities of over 10,000. Negro boys show superiority to Negro girls in the upper quartile of schools in communities over 10,000 in population, and in the lower quartile of schools in communities of 5,000 to 6,000. Caucasian girls of Grade 4 are superior to Caucasian boys in both the upper and lower quartiles in all types of community, but none of the differences are very marked.

The achievement of the pupils of this study in word meaning, as shown in Table 9, follows the same trend as that in paragraph comprehension for Negro children in relation to Caucasian children, and for urban areas in relation to rural. In general, the lower quartile for all grades in all types of communities shows that children of this quartile have more ability in reading words than in understanding paragraphs. Just the opposite is true for children of the upper quartile except Negro boys. Though in the overall average, girls have a slight edge over boys at the fourth-grade level in being able to read words, at the sixth-grade level boys of the upper quartile are superior to girls in knowing word meanings just as they are in paragraph comprehension.

Personality Test

When the California Test of Personality-1953 Revision, Elementary Form AA was administered, the distribution of pupils by total personality adjustment showed the median for all the children of this study falls well below the fifty percentile. This lag in adjustment is particularly marked for Negro boys and girls and Caucasian boys of Grade 4. A Spearman coefficient of correlation values for personality and the factors of chronological age

Table 9. AVERAGE GRADE LEVEL IN WORD MEANING ON SILENT READING TEST OF HIGH AND LOW QUARTILES, GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 IN THREE TYPES OF COMMUNITIES*

Average	All	Type I	Type II	Type III
Negro Boys Grade 4				
Lower	2.47	2.73	2.78	2.65
Upper	4.54	5.67	4.55	3.38
Negro Girls Grade 4				
Lower	2.75	2.80	2.62	2.53
Upper	4.71	4.87	4.80	3.60
Caucasian Boys Grade 4				
Lower	2.74	3.90	3.23	2.34
Upper	6.07	6.41	5.43	5.08
Caucasian Girls Grade 4				
Lower	3.33	3.68	3.73	2.85
Upper	6.60	6.80	6.03	5.50
Caucasian Boys Grade 6				
Lower	4.12	5.12	5.40	3.27
Upper	9.16	9.43	9.97	6.57
Caucasian Girls Grade 6				
Lower	4.62	5.16	4.74	4.07
Upper	8.72	8.24	9.82	6.93

*Type 1, over 10,000 population; Type II, 5,000 to 6,000 population; Type III, under 1,000 population (rural).

Table 10. FREQUENCY OF TOTAL PERSONALITY ADJUSTMENT SCORES FOR PUPILS OF NEGRO GRADE 4, CAUCASIAN GRADE 4, AND CAUCASIAN GRADE 6

		Grade 4				Grade 6	
Score[1]	Percentile[1]	Negro Boys	Negro Girls	Caucasian Boys	Caucasian Girls	Caucasian Boys	Caucasian Girls
142 - 144	98.5 - 100						
139 - 141	97.5 - 98.4				2		
136 - 138	92.5 - 97.4				1		1
132 - 135	85.0 - 92.4					4	1
128 - 131	75.0 - 84.9			1	1	1	2
123 - 127	65.0 - 74.9	1	3		3	2	6
118 - 122	55.0 - 64.9	1	1	2	1	5	5
111 - 117	45.0 - 54.9	4	6	4	5	10	7
102 - 110	35.0 - 44.9	3	3	10	9	6	8
91 - 101	25.0 - 34.9	8	10	12	4	6	11
80 - 90	15.0 - 24.9	10	17	10	6	6	5
70 - 79	7.5 - 14.9	7	10	12	6	1	3
60 - 69	2.5 - 7.4	4	4	4		4	2
50 - 59	1.5 - 2.4	5	1	3	1	1	
1 - 49	Below 1.4		1	1	1	1	
N		43	56	59	40	47	51

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[1] Norms given in the Manual for California Test of Personality-1953 Revision-Elementary Series

and total intelligence showed no significant dependence between chronological age and personality adjustment. A significant dependence at the .05 level existed between total intelligence and personality adjustment for Caucasian boys of Grade 4 and both Caucasian boys and girls of Grade 6. Because many children in this study had only one parent in the home, the statistical significance of a single parent in the home upon personality adjustment was computed by the use of the Chi square technique. No significant dependence was found to exist.

OBTAINING THE LANGUAGE SAMPLES

In planning the activity out of which the language samples would come, the controlling factor was the consideration that the language of the children was to be compared with the language of their reading textbooks. The language of the reading textbooks was primarily narration; therefore, it seemed logical that the children's oral and written language ought to be narrative in style also. To written language that was narration there was only one serious objection, which was that the common type of narrative, a personal experience, has been assigned so frequently as a school composition exercise that at the sixth-grade level, particularly, pupils might be expected to do a very mediocre job of writing out of sheer boredom. Nevertheless, since this study was not intended to measure originality, and it was essential that a fair amount of language be obtained from all the children who were able to write at all, the argument for a narrative type of written language outweighed the objection to it.

In the case of oral language, the objection to narration was greater. The situation in which the sample would be obtained would be more artifical than that ordinarily considered good for obtaining oral language since some linguists maintain that the only true oral language is that of free conversational interchange. In spite of this objection, it was decided that the artificiality of the situation would have to be accepted, and might even prove valuable since a good deal has been said recently about our need to obtain language used in varied situations before we can make really accurate statements about what language is really like. Though the language sample might not contain certain features of free conversational exchange, a large part of the conversation of both children and adults is the lengthy recital of a personal experience. As in the case of written language, the necessity for comparing the oral language to textbook language outweighed the objection to narration.

It was decided that twenty-five independent verbalizations of oral language and twenty-five of written language would be the maximum amount of language that would be analyzed for each child. This maximum amount of language proved to be about one typewritten page, an amount that corresponded fairly well with a page of textbook language. No minimum amount of language to be considered was set, it being held that a child's inability to use language in either a written or an oral language situation was an important part of his use of language as a whole.

The Written Language

The written language was obtained in what would be regarded as a regular class writing exercise except that the investigator supervised the writing instead of the classroom teacher. The children were allowed to write for an hour if they wished to use that much time, but they were not assigned any specific length of time for writing. They were furnished with good-quality, ruled theme paper and pencils with erasers, and were told that they might erase and correct whenever they felt correction was desirable.

It is interesting to note that even at the sixth-grade level, little correction was done though most of the children finished writing within thirty or forty minutes, and so had ample time for revision. When they did erase, they usually erased in order to correct the spelling of words. Revision for improved structure was apparently something most of them had never practiced.

The stimulus for writing was a colorful picture, large enough so that its details were visible from any part of the classroom. The picture was designed to provide something for the most uninventive to write about, while, at the same time, it could inspire some children to write original stories. It was full of details in order to enable those who could do nothing but enumerate what they saw to write a series of sentences naming things. The dominant object was a family in a car on a road through a forest, but there were other suggestive objects such as an old shack, a boat on a lake, a city in the distance, and numerous animals, some of which were engaged in actions which might inspire stories. The preparation for the writing was a short discussion of the picture by the pupils, after which they were told to write any story the picture made them think of.

After the written lesson, the samples of the written language were typed in duplicate for the analysis of the structural patterns. Since for this study there was to be no description of spelling characteristics, and the children's spelling of many words was so original that only a person who knew the picture could translate them, the spelling was corrected in the typescript. The originals were preserved so that spelling aberrations might be studied later if it were desirable.

Besides analysis of it for structures used, the written language was carefully scanned for juncture errors, and the number of these was recorded.

Juncture errors were held to occur when the child wrote a series of independent clauses not joined by and as a single sentence, or when the child inserted a period in the middle of what was obviously an independent clause, whether the period was followed by a capital letter or not.

The Oral Language

The obtaining of the oral language samples was left to the last to let the children become well enough acquainted with the investigator that they would be at ease, or as much at ease as was possible, in telling stories. As had been done in getting the written sample, a picture was used to stimulate language. To avoid the boredom of repetition for the children, the picture was different from the first one, but it was full of details. Its theme was again an activity that might be a family one, and it had possibilities for inspiring original stories. Each child was brought singly into a room that was a familiar part of his school life, and sitting at a table with the investigator, told his story. The picture which inspired the language was large enough to hide the tape-recorder, and was set up in front of it. Though the microphone was visible and the child knew his language was being recorded, the recorder was partially hidden to prevent his being so fascinated by the mechanical aspects of recording that he would forget to talk. Except for the children of one Negro school, all of the children in this study were familiar with tape-recorders. A surprising number volunteered the information that someone they knew had a tape-recorder and that they had played at recording their voices. In the one Negro school where the children were unfamiliar with the recorder, the investigator took the time to play back a small portion of each child's recording for him, a device that stimulated eagerness to talk. On the whole, the children displayed less nervousness than had been expected, and that little only in the first moments.

After a few minutes of conversation before the recording began, the investigator refrained from asking questions except when they were necessary to get language. To lessen the effect of monologue, the investigator displayed absorbed interest in what the child was saying and responded to his remarks with facial expression and common noise appreciations such as "M-m-m." For most subjects, this type of language situation produced a large amount of language in a short time. In less than ten minutes more language was recorded for most of the pupils than was analyzed.

Transcription of the language samples proved to be one of the most time-consuming tasks of the research. By far the most difficult to transcribe was the speech of Negro children of rural areas. Some of their pronunciations of words were not common for the region, but it was probably their failure to enunciate the last syllable of words clearly that caused the most trouble. That even Caucasian children have made great improvement in voice tone, pronunciation, and enunciation between the fourth-grade and sixth-grade levels was obvious in the comparative ease with which the language of sixth-grade children could be transcribed.

As the language was transcribed, it was listened to as many times as were necessary to divide it into phonological units. The end of a phonological unit was determined by a silence preceded by accent and a falling tone regarded as terminal. At the time of the structural analysis, the phonological unit was further segmented into communication units and mazes. A communication unit was a meaningful unit, either an independent clause or an utterance which could be extended into a semantically complete clause. An answer to the question "Are you going?" such as, "Yes," or "I think tomorrow," would be considered a communication unit called an utterance. By definition an utterance is a partial communication unit which is complete in context but not outside of context. Since the children in this study told stories and only a few had to be helped along with questions, there are fewer of these units which are semantically incomplete in themselves (utterances) in their language than there might be in a conversational type of language situation. Later these incomplete units were separated out and tallied alone.

A maze (a term suggested originally by Walter Loban) is an element of the phonological unit which is the result of confusion on the part of the speaker. In her comparison of the language of children and that of their textbooks, Ruth Strickland divided mazes into *noises*, *holders*, *repeats*, and *edits*--terms which describe pretty well what mazes are. In the analysis of the language for this study, mazes were segmented out by the use of brackets. At this point in the analysis, the transcription of a child's language looked like this:

> So they went on home/ and [they/ she cooked some/] she
> fixed their daddy/ her husband/ dinner//# And/ [and they/
> they went/ and] she told the children go out and find their
> friends and play for a few minutes/ and [it was time/ and]
> come back in cause it would be time for their nap//#

As may be seen in the above transcription of children's language, the symbol # marks the end of a phonological unit which here coincides with the longer pause indicated by the double-bar (//).

The Textbooks

The textbook sample consisted of eight pages from six commonly used reading textbooks for Grade 4 and six for Grade 6. These pages were chosen, as near as possible, in the following manner: the first page, the tenth page, the twentieth page, and the fiftieth page from the beginning of the book; and four pages in the same relative order from the back of the book.

An exact order was impossible because of the profuse illustrations of the textbooks. In order to get a full page of text, pages which were chosen were those which were not illustrated. These pages were then analyzed by the same method used to analyze the language of the children.

THE METHOD OF ANALYSIS

The method used for analyzing all the language samples, written and oral, for this study was one set up in 1962 for the research of Walter Loban of the University of California and Ruth G. Strickland of Indiana University.[1] It consists of two levels of analysis, the first showing the arrangement of basic grammatical elements, and the second showing elaboration of these elements.

First Level of Analysis

For the first level of analysis the following symbols were used:

1 the subject, sometimes called the whole subject or the subject slot.
Example:

1
The wise old owl said, "It's better to try."

2 transitive and intransitive verbs used as the predicate, the verb slot of the sentence when the verb is not linking, passive, or a part of to be.
Example:

2
One day in summer we were driving to the lake.

(2) part of the verb, not the nucleus, when the verb parts are separated by other sentence elements.
Example:

(2) 2
And you couldn't even see him.

---

[1] The system was set up at a conference of linguists meeting at Indiana University. The conference was supported by a grant from the U. S. Office of Education. The linguistic consultants at this conference were John Carroll, W. Nelson Francis, David Reed, Fred Householder, Harold Whitehall, and Mansur Ekhtiar.

2b linking verb, passive verbs, and verbs of the to be class.
Example:

2b
And two of them were named Willy Davis and Tommy Davis.

3 the inner complement, the indirect object.
Example:

3
My mother told me to get off of it.

4 complement of a transitive verb, direct object.
Example:

4
We did nearly all the rides.

5 the complement of the linking verb, the subjective complement.
Example:

5
But I was lost.

M the syntactic elements which are more or less movable. These have been separated into five types.

M_1 an expression of place, tells where.
Example:

M_1
They rode on the roller coaster.

M_2 an expression of manner, tells how.
Example:

M_2
So the Halls went on with their trip.

M_3 an expression of time, tells when.
Example:

M_3
You will be going home soon.

M_4 an expression of purpose, cause, or condition.
Example:

M_4
If you look closely, you can see an owl up in a tree.

M_5 a preposition plus the indirect object.
Example:

M_5
Jane said to Dick, "We've blown out a tire."

+ co-ordinate conjunction.
Example:

+
It can hold about six people and has only one window.

≠ a connector which joins a causative subordination to the rest of the sentence.

Example:

≠
So, when they went home, their daddy and their mother went with them.

U a short utterance, a word group which carries meaning, and ends with a falling intonation which may be considered terminal.

Example:

U
What was there to win? Little ducks.

[ ] nonstructural elements which are mazes, hesitations, false starts, etc.

Example:

And I had [a apple with some] a apple [with some] with some candy.

w an initial question word: why, where, etc.

Example:

w
Where is Mr. Crutcher.

When the analysis of the language on Level 1 was complete, a tabulation of the patterns of the communication units of each child's language was made. The commonest basic patterns (the grammatical elements of independent predication exclusive of movables) were the following:

Basic Pattern	Example
12 (subject-predicate)	1 2 We sailed through the breeze.
124 (subject-predicate-direct object)	1 2 Luckily we had on life belts.
1 2b 5 (subject-linking verb-complement)	1 2b 5 But I was lost.
1234 (subject-predicate-indirect object-direct object)	1 2 3 4 He brought me a balloon.
2b 1 (expletive-linking verb-subject)	2b 1 There was a man.

In this study, the basic patterns alone and the basic patterns with movables will be called structures or patterns, so that when the word pattern is used both the basic 124 may be meant or such expansions of 124 as 124M$_1$ or M$_3$124M$_1$M$_3$. A tabulation of one child's oral or written language or of a page of one of the textbooks would look like the simulated page below.

I.D. 007

Number of Patterns: 7
Number of Units: 9

Pattern	Repetition
$M_3$124	1
12M_1	
1234	
124	
+12	
+12M_2	
+124	1
No. of Repetitions	2

The number of patterns and the number of structural units (individual patterns plus the number of repetitions of each individual pattern) were recorded so that the varying amount of repetition of structure by individuals could be calculated. Though under some circumstances repetition of structure can be a device to obtain specific effects, especially emotional effects, too much repetition ordinarily produces a monotony that the mature writer tries to avoid. Too much repetition of structure may also indicate lack of development of the ability to use a variety of structures.

At this point in the tabulation, the symbol T was added to certain structures. In the above tabulation, there is one case where a pattern is indented and set directly below another pattern (12M_1 and 1234). This indentation indicates that two syntactical patterns which were semantically complete occurred in the same phonological unit in the oral language or in the same sentence in the written language. To the structures in multi-structured phonological units or sentences, T was added in the following fashion: immediately after the first structure ($12M_1T$), and immediately in front of the second structure (T1234). The T meant in the first case that the structure was followed by another structure; in the second case, T indicated that the structure was preceded by a structure. The frequency of T structures showed whether a child was in the habit of writing or speaking compound sentences instead of simple or complex ones, or whether he wrote several independent clauses as a single sentence or spoke several communication units without a falling inflection between them.

Second Level of Analysis

The second level of analysis of the language was a deeper analysis which was intended to show how the elements of Level I were elaborated--how the grammatical skeleton was clothed or, in other words, how subjects, verbs, and objects were modified, how auxiliaries were added to verb nucleii to express mode more exactly, and whether modifiers were single words, phrases, or clauses. In the symbols used in Level II, n means nucleus, and s means satellite (modifier or elaborator). The symbols used in the second level of analysis are the following:

n the nucleus of a subject group.
Example:
n
Beautiful flowers grew along the road.

nv the nucleus of a verb group.
Example:
nv
You couldn't even see him.

(sg) a phrase related only to the subject.
Example:
(sg)
This fat lady stopped in front.

sg a phrase related to the direct object, indirect object, or complement.
Example:

sg
I saw this great big old tree.

(ss) a clause related only to the subject.
Example:

(ss)
Whatever held her foot was stronger than David.

ss a clause used as direct object, indirect object, or complement.
Example:

ss
Jimmy said he would like to have the baby deer.

v(sg) a verb phrase or compound predicate.
Examples:

v(sg)
He might be at home.

v(sg)
I looked and looked.

Phrases modifying the verb. These may have been M_1, M_2, M_3, M_4, M_5 on Level I.

sgv1
sgv_1 Example: His family was going to Mississippi.

sgv2
sgv_2 Example: All of a sudden up came a giant tarantula.

sgv_3
sgv_3 Example: Next week was Jimmy's birthday.

sgv_4
sgv_4 Example: His family was going to Mississippi to visit his uncle.

sgv_5
sgv_5 Example: They brought back food for everybody.

Clauses modifying the verb. These may have been M_1, M_2, M_3, M_4, M_5 on Level I.

ssv1
ssv_1 Example: David pulled her to a branch where she could hold.

ssv2
ssv_2 Example: It ran so fast I could not catch it.

ssv_3
ssv_3 Example: After you have done this, you can go for a ride.

ssv_4
ssv_4 Example: If he fell, they would catch him.

ssv5
ssv_5 Example: He gave it to the man who runs the ferris wheel.

Perhaps the greatest value of Level II is in pointing out elements of structure which might receive more detailed study. It raises many questions. How often is a noun cluster composed of a noun and a relative clause? How elaborate is any clause or any phrase, i. e., how many levels of subordination make up a single clause or phrase? Does the child use verbals extensively? Because all of these deeper analyses are time-consuming, this study has attempted to answer only a few of the questions which the analysis on Level II raises. For this purpose two sub-groups composed of the high and low quartiles when pupils are classified according to their Total Intelligence and their Verbal Intelligence have been used.

CHAPTER III

Findings: Patterns of Children's Oral Language-Level I

THE PHONOLOGICAL UNIT

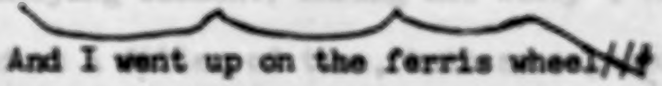
When the oral language of the children in this study was being transcribed from the tapes, it became evident that the speech of these children was characterized by a large number of short communication units beginning with and. It has been noted previously that children speak in long phonological units composed of several communication units joined by and, and in this study there were such units:

> Child: And I was up on this ferris wheel/ and I got scared/ and I started crying//#

In the samples of children's speech in this study, however, a series of short phonological units, each consisting of one communication unit beginning with and occurred more frequently than the long unit did:

> Child: And I went up on the ferris wheel//# And it stopped/ and I was way up in the air//# And I thought it was gonna fall//# And when I got down/ I went and tried to find my mother//#

To make certain that these two types of phonological unit did exist, the speech samples were read again and again. Decision as to whether the and joined two or more semantically complete units, or whether it was the introductory word of a phonological unit was based on the pitch prominence which marks the beginning and end of a communication unit, the length of the juncture or pause before the and, the placing of the falling intonation, and the pronunciation of and. The short phonological units had this pattern of pitch:



> Child: And I went up on the ferris wheel//#

The pause, as indicated by the double-bar juncture was long, and it was accompanied by the falling inflection which indicated the end of a communication unit. Furthermore, when the and occurred within the phonological unit, it was usually pronounced 'nd. It was always pronounced 'nd when it joined a plural subject, predicate or direct object, or the last of a series of modifiers to other modifiers. On the other hand, when and introduced a new phonological unit, it was always fully pronounced and it was stressed.

After the spoken language was transcribed, a study of the difference between the use of and within the phonological unit and the use of and to introduce a phonological unit revealed several interesting things. Within the unit, besides being used in the customary way to join compound elements, the and frequently joined two independent structures, one of which an adult would have subordinated:

Child: And it stopped/ and I was way up in the air//#

Adult: When it stopped, I was way up in the air//#
or
And it stopped when I was way up in the air//#

When used to introduce a phonological unit and had two well-defined uses, and several minor uses:

1. It produced rhythm. This rhythmic quality is characteristic of narrative style in the folk tale when the original flavor of its telling by the folk has been preserved. It is characteristic of the narrative style of the King James version of the Bible. It is common in highly emotional and rhythmic passages in modern authors. For the child, it seemed to serve also partly as a unifying element, making his story a single whole.

2. It served as a filler of time, both as a guard against nervousness

and as an interval for thought about what to say next. *And* is used this way by adults who are not trained public speakers when they must face an audience and talk.

3. Less frequently, children used *and* at the beginning of a unit for emphasis:

> *Child*: It had green eyes/ and a big old tail/ and six legs//# *And it was black*//# They went to the stand where they sell popcorn/ and they bought cotton candy//# *And they ate it*//#

4. In a few instances, notably at the sixth-grade level in a rural community set in the mountains, *and*, used at the beginning of a phonological unit, was a result of retention of seventeenth-century English usage:

> *Child*: And you look over the cliff/ you may fall//#

As used by these children, the *and* was a substitute for *if* in modern English usage. When *and* was used to introduce this clause of condition, it did not have the same amount of stress as it did when it was used to introduce a new phonological unit.

STRUCTURES OF ORAL LANGUAGE

Table 11 shows the frequency of use of various structures of children's oral language. Of the first twenty-eight structures in rank, twelve begin with *and*. These are the structures preceded by the plus sign (+). Other characteristics of children's oral language which stand out in this table are these:

1. There is a high frequency of use of the 124 pattern (subject-verb-direct object) in the structures +124, 124, and T124. These structures are of the first three ranks for children of all grades.

2. Of fourth rank for Caucasian children of both Grade 4 and Grade 6 is the structure 12b5 (subject-linking verb-complement). This structure is

Table 11. RANK ORDER AND FREQUENCY OF STRUCTURES IN CHILDREN'S SPOKEN LANGUAGE

Structures	All		Caucasian 6		Caucasian 4		Negro 4	
	Rank	f	Rank	f	Rank	f	Rank	f
+124	1	639	1	171	1	248	1	220
124	2	514	3	121	2	184	2	201
T124	3	428	2	147	3	139	3	142
12b5	4	245	4	108	4	86	6	51
+12M$_1$	5	223	7	54	5	75	4	94
T12M$_1$	6	155	6	59	9	46	7	50
+12b5	7	150	10	45	6	61	10	44
T12b5	8	149	5	70	11	40	13	39
12M$_1$	9	144	11	41	8	48	5	55
124+T	9	144	8	52	7	49	11	43
+M$_1$124	10	126	9	49	12	39	14	38
+124+T	11	124	12	40	13	38	9	46
T12	12	123	14	35	14	37	6	51
M$_1$12M$_1$	13	122	11	41	10	41	12	40
+M$_1$12M$_1$	14	115	15	34	15	34	8	47
+12M$_1$+T	15	110	13	39	17	31	12	40
M$_1$124	16	94	17	26	16	33	16	35
12M$_1$+T	17	87	17	26	20	24	15	31
+2b1	18	79	19	23	16	33	21	23
12b5+T	19	69	16	33	23	20	26	16
+1234	19	69	29	11	27	14	10	44
+12M$_2$	20	68	21	20	22	21	18	27
12M$_2$	21	66	22	19	21	22	20	25
+124M$_1$	22	61	19	23	23	20	24	18
124M$_1$	22	61	21	20	19	25	26	16
+12+T	23	55	21	20	28	13	22	22
T124+T	24	52	19	23	30	10	23	19
T1234	25	48	27	13	31	9	19	26

used less by Negro children than by Caucasian children. The relatively infrequent use of this pattern by Negro children may be an indication of their immaturity in the use of language since Loban found that the 12b5 pattern was used more frequently by older children:[1] however, there does not seem to be much difference in the frequency of use of 12b5 by the Caucasian pupils of Grade 4 and Grade 6 in this study.

3. The basic unelaborated 12 pattern (subject-verb) does not appear among the first twenty-eight structures of rank. In the use of $+12M_1$, $12M_1$ (subject-verb-movable of place), and T12, Negro children of Grade 4 exceed both children of Caucasian Grade 4 and Caucasian Grade 6. The unelaborated 12 structure is, of course, the simplest basic structure, but, when elaborated, it may also be one of the most complicated. In their tabulations of sentence structures of adults, J. N. Hook and E. G. Mathews found that about thirty percent of the sentences in fifty nonfiction passages of about one thousand words each from American newspapers, magazines and books were based on this structure.[2] However, they did not calculate the degree of elaboration used by adults in each sentence based on this pattern.

4. The structure T124 (124 preceded by a structure) is in second rank for Grade 6, but only third rank for both Negroes and Caucasians of Grade 4. Also pupils of Grade 6 used T12b5 many more times than pupils of Grade 4 do. Though the T probably implies a phonological unit in which there are two or more communication units joined by *and*, it may also mean that pupils of the sixth grade speak in longer phonological units than

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[1] *Op*. *cit*., p. 83.

[2] *Op*. *cit*., p. 83.

younger children do. Re-inforcing this conclusion is the fact that pupils of Grade 6 do not use nearly as many structures beginning with and as do the younger children. The drop in frequency of +124, +12M_1, and +12b5 at the sixth-grade level implies that pupils of this grade do not need the emotional support of the and between phonological units as much as fourth-grade pupils do. It may also imply that pupils of Grade 6 have a better sense of organization than those of Grade 4, and have other words than and with which to indicate a sequence of ideas.

5. The movable M_1 (place) occurs more often than any other movable, and it always occurs at the end of a structure in these first-ranking twenty-eight structures.

6. The movable M_3 (time) is second to the movable M_1 in use. In these first-ranking structures, it always appears at the beginning of a pattern.

7. The movable M_2 (manner) is used infrequently in these most-used structures, the only two structures containing it being +12M_2 and 12M_2.

8. Though the structure 1234 (subject-verb-indirect object-direct object) is not used extensively by any of the pupils in this study, the difference between the amount of its use by Negro and Caucasian children is great. Negro children, as shown by Table 11, use T1234 frequently enough to give that structure nineteenth rank for them compared to thirty-first for Caucasian children of Grade 4, and twenty-seventh for Caucasian children of Grade 6. As shown by Table 11, pattern +1234 is tenth in rank of use for Negro children, but only of Rank 27 for Caucasian children of Grade 4 and Rank 29 for Caucasian children of Grade 6. In this structure as used by Negro children, me is frequently the indirect object or inner complement. Some instances of the use of 1234 show the child's attention to detail. For instance, a Negro child telling about riding the ferris wheel may say,

"I gave the man a dime," instead of merely saying, "I rode the ferris wheel." Whether this attention to detail may have socio-economic implications in that things like riding ferris wheels are not commonplaces in the Negro child's life, or whether it shows superior story-telling ability is not certain. At any rate, Negro boys who made high scores in verbal maturity used the structure twice as often as Negro boys who made low scores. Some instances of the use of me as an indirect object imply that Negro children are more dominated by their parents than Caucasian children are. The Negro child's stories are full of what his mother and father said and what they told him to do. Some frequent use of the structure 1234, then, may be a sign of psychological immaturity.

Frequency of Structures as Used by High and Low Quartiles

When the frequency of use of the first seventeen of the high-ranking structures of this study is computed for low and high quartiles of each sex in each grade, the most significant finding is that even basic and much-used structures like +124 and 124 are used almost entirely by only three-fourths of the children of any group. As one moves down the structures in the order of their frequency, the high quartile accounts for almost the entire use of a structure. In some cases it does account for the entire use. Negro pupils of Grade 4, who were shown in Table 11 as using 12b5 less than Caucasian pupils, use 12b5 only in the high quartile. In other words, one-fourth of the pupils account for the entire use of 12b5. Children of Grade 6 show more spread in the use of 12b5 than children of Grade 4 do. Whereas it is used a total of 108 times by Grade 6 as a whole, the high quartile uses it only 63 of those times. The average of use of 12b5 in the high quartiles of all grades shows that all boys use this structure more than girls do. In Grades Caucasian 6 and Negro 4, girls are slightly superior

Table 12. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF NEGRO BOYS, GRADE 4 - ORAL LANGUAGE

		Frequency of Structures										
		0	1	2	3	4	5	6	7	8	Total	Average
+124	H				3	5	3				44	4.0
	L	11									0	0.0
124	H				3	5		1	2		49	4.4
	L	10	1								1	0.1
T124	H			6	3	2					29	2.6
	L	8	3								3	0.3
12b5	H			3	6	1					29	2.7
	L	11									0	0.0
$+12M_1$	H		6	2	1	1	1				22	2.0
	L	11									0	0.0
$T12M_1$	H		7	2	1		1				19	1.7
	L	11									0	0.0
+12b5	H		10	1							12	1.1
	L	11									0	0.0
T12b5	H		10	1							12	1.1
	L	11									0	0.0
$12M_1$	H		4	5	2						20	1.8
	L	11									0	0.0
124+T	H		8	3							14	1.3
	L	11									0	0.0
$+M_3124$	H		6	3	1		1				20	1.8
	L	11									0	0.0
+124+T	H		8	3							14	1.3
	L	11									0	0.0
T12	H		5	6							17	1.5
	L	11									0	0.0
M_312M_1	H		9	1	1						14	1.3
	L	11									0	0.0
$+M_312M_1$	H		9	2							13	1.2
	L	11									0	0.0
$+12M_1+T$	H		10	1							12	1.1
	L	11									0	0.0
M_3124	H	3	5	3							11	1.0
	L	11									0	0.0

Table 13. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF NEGRO GIRLS, GRADE 4 - ORAL LANGUAGE

		Frequency of Structures										
		0	1	2	3	4	5	6	7	8	Total	Average
+124	H					2	7	3	1	1	76	5.4
	L	9	5								5	0.4
124	H				6	4	2	2			56	4.0
	L	11	3								3	0.2
T124	H			4	10						38	2.7
	L	14									0	0.0
12b5	H		9	3	1	1					22	1.6
	L	14									0	0.0
+12M$_1$	H			3	8	1	2				44	3.1
	L	14									0	0.0
T12M$_1$	H		9	5							19	1.4
	L	14									0	0.0
+12b5	H		9	5							19	1.4
	L	14									0	0.0
T12b5	H		10	4							18	1.3
	L	14									0	0.0
12M$_1$	H		8	4	2						22	1.6
	L	14									0	0.0
124+T	H		8	5	1						22	1.6
	L	14									0	0.0
+M$_3$124	H		8	6							20	1.4
	L	14									0	0.0
+124+T	H		10	2	2						20	1.4
	L	14									0	0.0
T12	H		8	3	3						23	1.6
	L	14									0	0.0
M$_3$12M$_1$	H		8	4	1	1					23	1.6
	L	14									0	0.0
+M$_3$12M$_1$	H	2	7	3		2					21	1.5
	L	14									0	0.0
+12M$_1$+T	H		10	1	1	2					23	1.6
	L	14									0	0.0
M$_3$124	H	2	11		1						14	1.0
	L	14									0	0.0

Table 14. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN BOYS, GRADE 4 - ORAL LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
+124	H				2	7	3	1	1		1			71	4.7
	L	15												0	0.0
124	H				9	3	2	1						55	3.7
	L	15												0	0.0
T124	H			5	6	2	2							46	3.1
	L	15												0	0.0
12b5	H		3	7	4		1							34	2.3
	L	15												0	0.0
+12M_1	H		6	7	2									26	1.7
	L	15												0	0.0
T12M_1	H		10	5										20	1.3
	L	15												0	0.0
+12b5	H		6	7	2									26	1.7
	L	15												0	0.0
T12b5	H		10	5										20	1.3
	L	15												0	0.0
12M_1	H		11	3	1									20	1.3
	L	15												0	0.0
124+T	H		12	3										18	1.2
	L	15												0	0.0
+$M_3$124	H		11	3	1									20	1.3
	L	15												0	0.0
+124+T	H		7	7	1									24	1.6
	L	15												0	0.0
T12	H		13	1	1									18	1.2
	L	15												0	0.0
$M_3$12M_1	H		12	3										18	1.2
	L	15												0	0.0
+$M_3$12M_1	H		9	5	1									22	1.5
	L	15												0	0.0
+12M_1+T	H		12	2		1								20	1.3
	L	15												0	0.0
$M_3$124	H		13	1	1									18	1.2
	L	15												0	0.0

Table 15. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN GIRLS, GRADE 4 - ORAL LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
+124	H				4	3			2		1			47	4.7
	L	10												0	0.0
124	H				3	4	1	1						36	3.6
	L	7	3											3	0.3
T124	H			6	3			1						27	2.7
	L	10												0	0.0
12b5	H			7	3									21	2.1
	L	10												0	0.0
+12M_1	H		2	5	2	1								24	2.4
	L	10												0	0.0
T12M_1	H		8	1	1									13	1.3
	L	10												0	0.0
+12b5	H		6	3	1									15	1.5
	L	10												0	0.0
T12b5	H		8	2										12	1.2
	L	10												0	0.0
12M_1	H		4	5	1									17	1.7
	L	10												0	0.0
124+T	H		5	2		3								21	2.1
	L	10												0	0.0
+$M_3$124	H		7	3										13	1.3
	L	10												0	0.0
+124+T	H		9	1										11	1.1
	L	10												0	0.0
T12	H	1	7	2										11	1.1
	L	10												0	0.0
$M_3$12M_1	H		6	3	1									15	1.5
	L	10												0	0.0
+$M_3$12M_1	H		6	2	2									16	1.6
	L	10												0	0.0
+12M_1+T	H	5	4	1										6	0.6
	L	10												0	0.0
$M_3$124	H		7	2	1									14	1.4
	L	10												0	0.0

Table 16. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN BOYS, GRADE 6 - ORAL LANGUAGE

		Frequency of Structures										
		0	1	2	3	4	5	6	7	8	Total	Average
+124	H			4	3	4	1				38	3.2
	L	12									0	0.0
124	H			7	3	2					31	2.6
	L	12									0	0.0
T124	H			9	2	1					28	2.3
	L	12									0	0.0
12b5	H			5	6	1					32	2.7
	L	12									0	0.0
+12M_1	H		6	4	2						20	1.7
	L	12									0	0.0
T12M_1	H		8	4							16	1.3
	L	12									0	0.0
+12b5	H		9	3							15	1.2
	L	12									0	0.0
T12b5	H		8	4							16	1.3
	L	12									0	0.0
12M_1	H		9	2	1						16	1.3
	L	12									0	0.0
124+T	H		7	3	2						19	1.6
	L	12									0	0.0
+$M_3$124	H		8	2	1	1					19	1.6
	L	12									0	0.0
+124+T	H	4	8								8	0.7
	L	12									0	0.0
T12	H	2	9	1							11	0.9
	L	12									0	0.0
$M_3$12M_1	H		11	1							13	1.1
	L	12									0	0.0
+$M_3$12M_1	H	4	7		1						10	0.8
	L	12									0	0.0
+12M_1+T	H	1	9	1	1						14	1.2
	L	12									0	0.0
$M_3$124	H	1	11								11	0.9
	L	12									0	0.0

Table 17. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN GIRLS, GRADE 6 - ORAL LANGUAGE

		Frequency of Structures										
		0	1	2	3	4	5	6	7	8	Total	Average
+124	H				2	7	2	2			56	4.3
	L	12	1								1	0.1
124	H			9	3	1					31	2.4
	L	13									0	0.0
T124	H			1	5	4	1	1	1		51	3.9
	L	12	1								1	0.1
12b5	H		3	5	2	3					31	2.4
	L	13									0	0.0
+12M_1	H		5	5	2	1					25	1.9
	L	13									0	0.0
T12M_1	H		5	8							21	1.6
	L	13									0	0.0
+12b5	H		7	5	1						20	1.5
	L	13									0	0.0
T12b5	H		5	4	4						25	1.9
	L	13									0	0.0
12M_1	H		8	4	1						19	1.5
	L	13									0	0.0
124+T	H		7	5	1						20	1.5
	L	13									0	0.0
+$M_3$124	H		5	7	1						22	1.7
	L	13									0	0.0
+124+T	H		6	6	1						21	1.6
	L	13									0	0.0
T12	H		10	3							16	1.2
	L	13									0	0.0
$M_3$12M_1	H		7	6							19	1.5
	L	13									0	0.0
+$M_3$12M_1	H		11	1		1					17	1.3
	L	13									0	0.0
+12M_1+T	H		9	4							17	1.3
	L	13									0	0.0
$M_3$124	H	1	11	1							13	1.0
	L	13									0	0.0

in the use of T12b5 and +12b5, but the difference in use between the sexes is not marked. If use of this structure is a sign of maturity of language use as both Loban and Hunt have indicated, relative equality of the use of 12b5 by boys and girls is a significant addition to a growing body of evidence that boys are not as inferior to girls in the use of language as has been long thought, or there has been a change in our society which is causing boys to increase their development in the use of language.

Total of Different Oral Structures Used by Each Grade

When a tabulation of the total number of different structures used by children in their oral language and the frequency of use of each is made, it is increasingly apparent that language used on any single occasion, even when the total amount is not large, is highly individualistic. There are only about a hundred structures, or about one for each child in each of the three groups, which are used more than four times. The number of structures used one time is 65% of the total structures of Negro pupils of Grade 4, and

Table 18. TOTAL DIFFERENT STRUCTURES AND FREQUENCY OF USE OF STRUCTURES IN THE ORAL LANGUAGE OF PUPILS OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6

Grade	Total	Frequency of Use of Structures							
		1 time		2-4 times		5-10 times		Over 10	
		f	%	f	%	f	%	f	%
Negro 4	585	382	65	101	17	59	10	42	7
Caucasian 4	713	481	67	134	18.7	54	7.7	44	6.1
Caucasian 6	845	560	66.2	180	21.2	56	6.6	49	5.9

rises to 67% of the total structures of Caucasian pupils of Grade 4. That children of Grade 4 are able to produce 585-713 different variations of basic structures in ten minutes or less of talk shows how automatic structures of English needed for the expression of familiar activities of the child have become by the time he is nine or ten years old. In total use of different structures, Negro children are more than one structure per person below Caucasian children of Grade 4, which necessitates their more frequent repetition of a few structures. Though Caucasian pupils of Grade 6 use over one structure per person more than Caucasian pupils of Grade 4, the percent of their structures used only one time falls below that of children of Grade 4.

Comparison of Oral Language Structures with Those of the Strickland Study

A comparison of the structural patterns used in oral language by the children of this study and those used by the children in the Strickland study is made difficult by the difference in the phonological unit in the two studies. The children of the Strickland study spoke in long phonological units composed of several communication units joined by and. As a result, there are many T-structures in the tabulation of their language structures. The children of this study spoke most often in short phonological units beginning with and; therefore, in a tabulation of their structures, there are many plus structures. This difference in phonological units may be a result of the difference in the two language situations, the difference between a free conversational exchange and a language situation which borders on a monologue. On the other hand, it may be due to the immaturity of the children of the Strickland study in the use of pitch and juncture as compared with the children of this study. In such a matter as the use of voice as a carrier of meaning, the superior socio-economic status of the children of the Strickland study may be a disadvantage rather than an asset. In our society, superior socio-economic status has cut down the use of language as a recreational activity and a satisfaction of emotional needs, substituting looking at television and reading for it.

Though not shown in Table 19, all of the structures in the Strickland study which were not used to any extent by the children in this study were T-structures except one, $124M_3$. As is to be expected, 124 structures are of first rank in both studies, and 12b5 structures are next in frequency though there is a considerable drop in their use compared to the use of 124 structures.

Of structures other than those beginning with *and* which children of this study used more than those of the Strickland study did, the 2bl (*there* plus *be* plus a complement) structure is most noticeable. If the use of 2bl and +2bl by children of this study is combined, the 2bl pattern becomes even more significantly prominent in their language structures. Among ranking structures in the Strickland study, no 2bl structure appears at all, although Hook and Mathews list it as fifth of the five major sentence patterns of American English. The simple, unelaborated 12 structure is of thirteenth rank for children of Grade 6 in the Strickland study, but hardly used by children of Grade 6 in this study. It is probable that both of the above differences in use of structure are the result of a difference between the language situations of the two studies.

The only significant conclusions to be drawn from a comparison of the two studies seem to be that there is a difference in the structures used in a free conversational exchange of language and structures used in a quasi-monologue as shown particularly in the use of more plus-structures and more 2bl structures in quasi-monologue and in the use of more T-structures and 12 structures in dialogue. Other than the differences just named, the structures used by children who are superior in socio-economic status and education of parents as those in the Strickland study are, and those used by

Table 19. RANK ORDER AND FREQUENCY OF THE STRUCTURAL PATTERNS MOST COMMONLY USED IN THE ORAL LANGUAGE OF CHILDREN IN GRADES 4 AND 6 COMPARED WITH LANGUAGE OF CHILDREN IN THE STRICKLAND STUDY

Structural Pattern	Riling Caucasian Grade 4		Strickland Grade 4		Riling Negro Grade 4		Riling Caucasian Grade 6		Strickland Grade 6	
	Rank	f	Rank	f	Rank	f	Rank	f	Rank	f
+124	1	248			1	220	1	171		
124	2	184	1	202	2	201	3	129	1	266
T124	3	139	2	156	3	142	2	147	2	249
12b5	4	86	4	108	6	51	4	108	5	118
$+12M_1$	5	77			4	94	7	54		
+12b5	6	61			10	44	10	45		
124+T	7	49	3	123	11	43	8	52	3	181
$12M_1$	8	48	10	37	5	55	11	41	18	33
$T12M_1$	9	46	9	41	7	50	6	59	10	54
M_312M_1	10	41	17	25	12	40	11	41		
T12b5	11	40	7	63	13	39	5	70	6	112
$+M_3124$	12	39			14	38	9	49		
+124+T	13	38			9	46	12	40		
T12	14	37	13	29	6	51	14	35	12	50
$+M_312M_1$	15	34			8	47	15	34		
+2b1	16	33			21	23	19	23		
M_3124	16	33	13	29	16	35	17	26	19	31
$+12M_1+T$	17	31			12	40	13	39		
2b1	18	28								
$124M_1$	19	25	14	28	25	16	21	20	17	34
$12M_1+T$	20	24	8	51	15	37	17	26	11	52
$12M_2$	21	22	19	22	20	25	22	19		
$+12M_2$	22	21			18	27	21	20		
12b5+T	23	20	12	31	25	16	16	33	8	57
$+124M_1$	23	20			24	18	19	23		
12	24	19	18	23	20	25			13	49
$T12M_2$	25	18	17	25	24	18	25	17	20	30
$+M_312M_1+T$	26	16								
$+M_312$	26	16								
+1234	27	14			10	44	29	11		
+12					17	31				
T1234	31	9			19	26	27	13	24	26
+12+T	28	13			22	22	21	20		
T124+T	30	10	5	84	23	19	19	23	4	150
M_312M_1+T			21	19			18	25		
$124M_2$			15	27			20	21	21	29
$T124M_2$			20	21			22	19	25	25
$T124M_1$			18	23			23	17		
+12b5+T							24	16		
T12b5+T			19	22			25	15	9	55

children who are disadvantaged in these things are similar.

THE UTTERANCE

An utterance is a structurally incomplete portion of speech which occurs between two silences, but has meaning which it derives from previous speech. An utterance may be a single word or a group of words, but it does not have complete meaning when taken out of its context. In a speech situation which is dialogue, the utterance is an important part of the total body of the spoken language; in a speech situation which is monologue or quasi-monologue, it is a relatively small part of the total spoken language.

Table 20. TOTAL AND AVERAGE FREQUENCY OF UTTERANCE FOR ALL QUARTILES OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6

Quartile		Negro 4		Caucasian 4		Caucasian 6	
		Boys	Girls	Boys	Girls	Boys	Girls
1st	Total	0	0	0	0	0	0
	Average	0.0	0.0	0.0	0.0	0.0	0.0
2nd	Total	0	0	11	4	7	0
	Average	0.0	0.0	0.7	0.4	0.6	0.0
3rd	Total	10	10	27	20	20	13
	Average	1.0	0.7	1.8	2.0	1.8	0.9
4th	Total	27	26	78	41	39	39
	Average	2.4	1.9	5.2	4.1	3.2	3.0

Table 20 shows that in this study utterances are not a part of the spoken language of a fourth of the pupils of each grade. Half of the Negro boys and girls of Grade 4 and half of the girls of Caucasian Grade 6 do not express themselves in utterances. In the fourth quartile, all boys exceed the girls of their grade in use of these incomplete segments of language. All Caucasian children speak more utterances than Negro children do. Caucasian boys of Grade 4 average over five utterances apiece and Caucasian girls of Grade 4 average over four apiece. Some of the reasons for frequent utterance are these:

1. Some children had to be encouraged to talk. When the investigator had to question the child, the answer was often an utterance. Caucasian children had to be encouraged more than Negro children did, and boys more than girls at the fourth-grade level.

2. After boys of more rural districts (communities of Type 2 and Type 3) in which many of the fathers were farmers, ranchers, and workers in sawmills had finished a sentence, they often added phrases which were additional comment, or enlargement of the preceding complete remark.

3. Caucasian children felt the informality of the situation more than Negro children did. When questioned, Negro children answered in complete sentences, as Caucasian children did not.

When the total utterances of the children of this study are compared to those of the Strickland study, the difference between the two speech situations is marked. The total of the utterances of 75 pupils of Grade 4 in the Strickland study is 185; for 100 pupils of Caucasian Grade 4 in this study it is 181. In this study, 100 pupils of Grade 6 speak only 118 utterances while 100 pupils of Grade 6 in the Strickland study speak 262.

THE MAZE

Since a speaker of language, unlike a writer, does not ordinarily plan each sentence he is going to say before he makes a sound, and he has no opportunity to revise a spoken structure without repetition, his language is characterized by various words and sounds which are not a part of his basic communication structures. To these words and sounds, the name *maze* has been given. The maze may merely be a noise made while the speaker gropes for the next word to say. These noises are grunts, sighs, and *uh-uh* commonly. Some single words also serve this purpose. The most used of these in this study is *well*, as in "Well, we went outside." As has been pointed out previously, it is possible that in the frequent joining of independent communication units by *and* and *and so*, the *and* and *and so* are functionally more this type of maze which is called a holder than they are true conjunctions. Another type of maze occurs when a child starts to speak, but is hindered in some way and cannot proceed. He then repeats what he has already said as he gropes for a way to continue: "[And and we went and we went went] and we went into the tent." Finally, the maze is spoken when a child realizes he cannot say what he wants to with the structure he has started, and he begins again in an entirely different way: "[Then we finally] one of the carnival men finally came back."

Tabulation of the frequency and percent of use of maze by the children of this study in the high and low quartiles of use (Table 21) shows that pupils of both Grades 4 and 6 use many mazes. As might be expected children of Grade 6 use fewer mazes than those of Grade 4, but in the lower quartile of use, unexpectedly, Negro pupils of Grade 4 use fewer mazes than Caucasian children of the same grade. Furthermore, tabulation of the total and average use of maze by type of community (Table 22) shows rural school children using fewer mazes than children of larger schools do. The widespread use of maze is shown in Table 23 where it is seen that no child of this study spoke without using any mazes and only four out of three hundred children became involved in just one maze apiece.

That use of mazes in speech is partially related to maturity of language

Table 21. FREQUENCY AND PERCENT OF MAZES IN HIGH AND LOW QUARTILES OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6 - ORAL LANGUAGE

No. of Maze	Negro 4 Boys				Negro 4 Girls				Caucasian 4 Boys				Caucasian 4 Girls				Caucasian 6 Boys				Caucasian 6 Girls			
	Lower		Upper		Lower		Upper		Lower		Upper		Lower		Upper		Lower		Upper		Lower		Upper	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1					1	7.1			2	13.3											1	7.7		
2	2	18.2			1	7.1							1	10							2	15.4		
3	3	27.3			4	28.6															3	23.1		
4	1	9.1			3	21.4			1	6.7			1	10							2	15.4		
5	1	9.1			3	21.4			1	6.7			2	20			3	25.0			5	38.5		
6	2	18.2			2	14.3			4	26.7			4	40			5	41.7						
7									3	20.0			2	20			4	33.3						
8	1	9.1																						
9									2	13.3														
10	1	9.1							2	13.3														
11																								
12																								
13																			2	16.7			1	7.7
14																			1	8.3			4	30.8
15											4	26.7			1	10			1	8.3			1	7.7
16											4	26.7			1	10			2	16.7			3	23.1
17							5	35.7			1	6.7			2	20			1	8.3				
18			1	9.1			1	7.1			2	13.3			1	10			1	8.3			2	15.4
19			1	9.1			1	7.1							1	10			2	16.7			1	7.7
20			3	27.3							1	6.7			1	10			1	8.3			1	7.7
21							3	21.4			1	6.7			2	20								
22			1	9.1																				
23							2	14.3																
24							1	7.1																
25			2	18.2			1	7.1																
26																								
27			1	9.1							1	6.7							1	8.3				
28			1	9.1																				
29																								
30			1	9.1																				
31											1	6.7												
:																								
44															1	10								

seems evident in the decrease of its use as children grow older or advance in school from Grade 4 to Grade 6. The fact that all boys use more mazes than girls of their same grade and ethnic group do may also indicate that decrease of use of maze as a sign of fluency is also a sign of maturity of language. However, when it is considered that the children who scored lowest on a silent reading test of paragraph comprehension and word meaning--children of rural communities--used the fewest number of mazes, it is possible that fluency in use of language in the lower grades is a sign of satisfaction with one's attainment in use of language, and as such, it can be a barrier to further progress in language development.

Table 22. TOTAL AND AVERAGE FREQUENCY OF MAZES BY TYPE OF COMMUNITY

Type of Community	Grade 4				Grade 4				Grade 6			
	Negro Boys		Negro Girls		Caucasian Boys		Caucasian Girls		Caucasian Boys		Caucasian Girls	
	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.
Over 10,000	150	12.5	302	12.1	370	13.2	223	10.6	288	11.5	219	10.4
5,000 to 6,000	261	17.4	247	11.8	163	12.5	134	12.2	100	10.0	154	8.1
Rural	193	12.1	124	11.3	203	10.7	79	9.9	125	10.4	128	9.8

Because the children of this study showed rather poor total personality development, the Spearman coefficient technique was applied to see whether any relationship existed between their personality adjustment and their use of mazes. Only one of the six groups, Caucasian girls of Grade 6 showed any dependence. This was an .05 dependence between the scores they made on the personality test and their use of mazes.

Table 23. FREQUENCY DISTRIBUTION OF MAZES USED BY CHILDREN FROM THREE TYPES OF COMMUNITY

	1 (Over 10,000)						2 (5,000 to 6,000)						3 (Rural)					
f	N4♂	N4♀	C4♂	C4♀	C6♂	C6♀	N4♂	N4♀	C4♂	C4♀	C6♂	C6♀	N4♂	N4♀	C4♂	C4♀	C6♂	C6♀
00																		
01								1				1			2			
02	1	1		1								2	1					
03		3				2		1				1	3					
04	1	1	1							1		1		2				1
05	1	1	1	1	2	3		1		1	1	1		1				1
06		1	3	2	3	1	1					1	1	1	1	2	2	2
07				2	2	1		2	1	1	2	1			2	1	1	1
08				2	1	2	1	3				2						
09			1	2	2			3	1	2	2	2				3	2	2
10	1	1		1	3	2			2	1		1	1	1	2		2	
11	2	3	6	1	2	3		1	3		2	1		2	2		2	1
12		3	2	1	2		1	1			1	2	3		1	1	1	1
13	1		3	1	1	1	2				1				4			1
14	1	1	2	3	1	1			3			1			2			2
15	1		2	1			1	2		1		1		1	2		1	
16	1	3	2	1	1	2			2		1	1	1	1				
17		3			1		3	2		2			2	1	1			
18		1	2	1	1	1	1						1					1
19	1	1		1	1	1											1	
20					1	1	1			1			2					
21			1					3	1	1						1		
22													1					
23		1						1										
24		1																
25							2							1				
26																		
27			1				1										1	
28							1											
29																		
30	1																	
31			1															
Totals	12	25	28	21	24	21	15	21	13	11	10	19	16	10	19	8	13	13

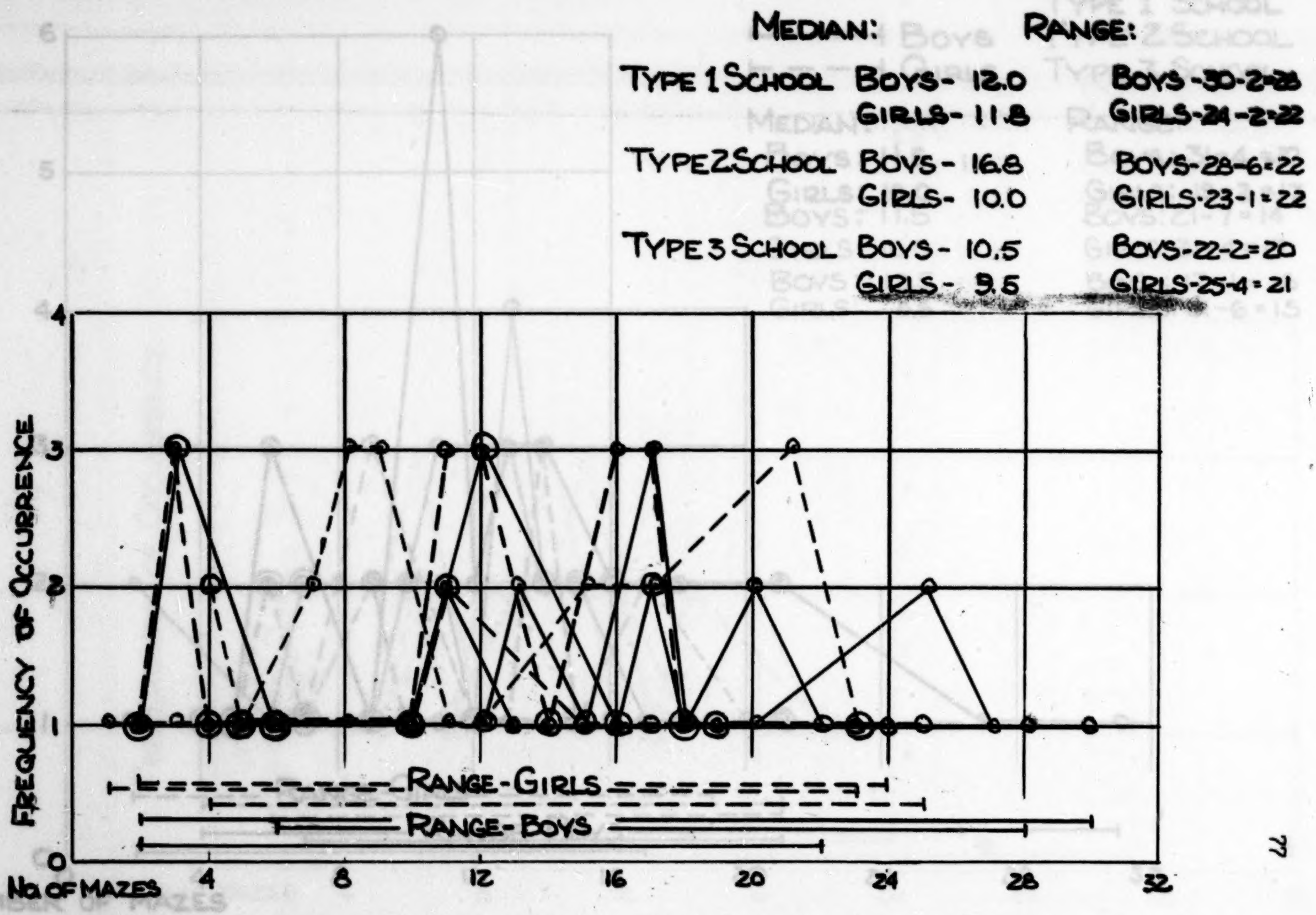

FIGURE 10 NUMBER OF MAZES - 4TH GRADE NEGRO STUDENTS

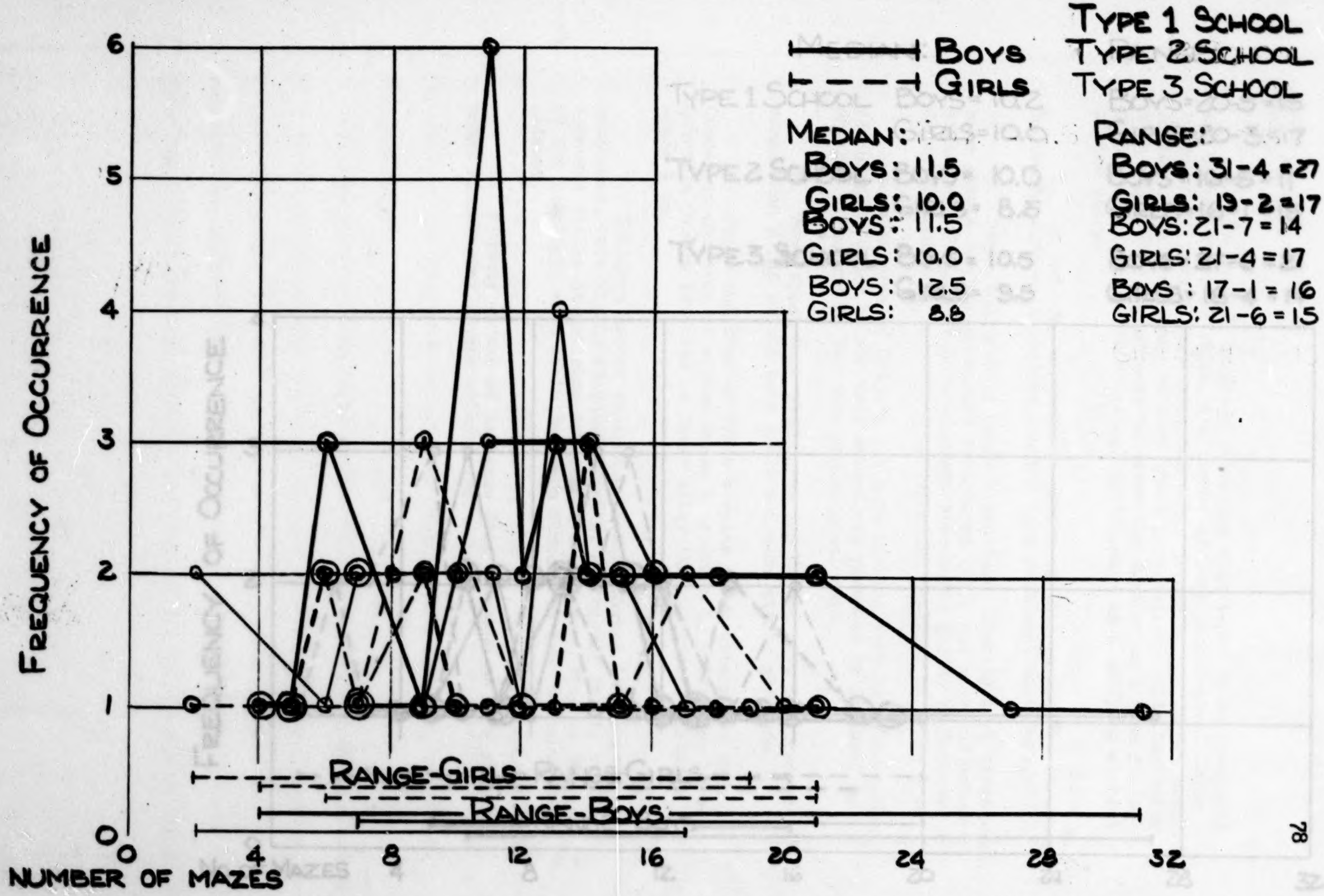

FIGURE 11. NUMBER OF MAZES - 4TH GRADE CAUCASIAN STUDENTS

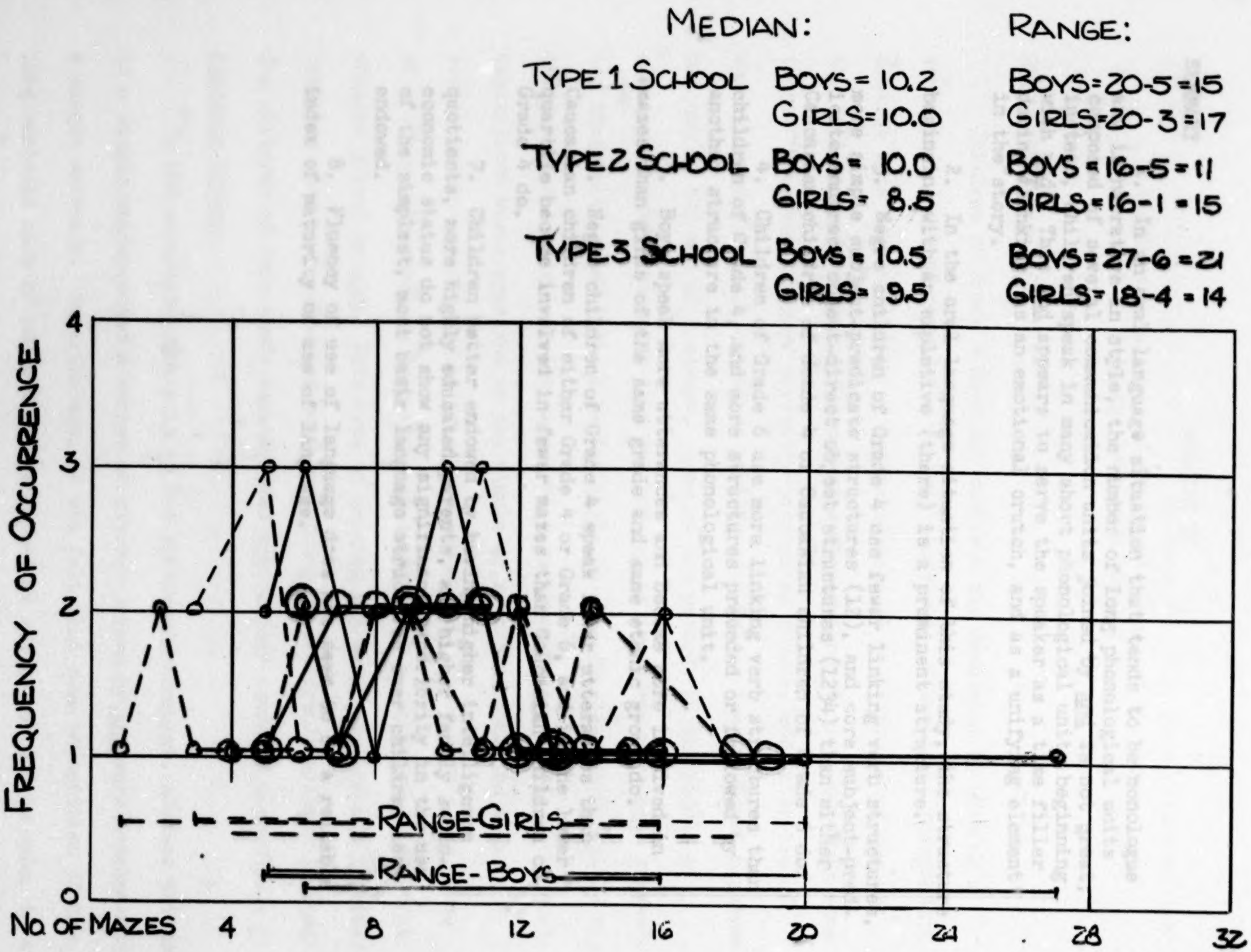

FIGURE 12. NUMBER OF MAZES - 6TH GRADE CAUCASIAN STUDENTS

SUMMARY

1. In an oral language situation that tends to be monologue and is narrative in style, the number of long phonological units composed of several communication units joined by and is not great; instead, children speak in many short phonological units beginning with and. This and appears to serve the speaker as a time filler during thinking, as an emotional crutch, and as a unifying element in the story.

2. In the oral language situation of this study, the structure beginning with an expletive (there) is a prominent structure.

3. Negro children of Grade 4 use fewer linking verb structures, more simple subject-predicate structures (12), and more subject-predicate-indirect object-direct object structures (1234) than either Caucasian children of Grade 4 or Caucasian children of Grade 6 do.

4. Children of Grade 6 use more linking verb structures than children of Grade 4, and more structures preceded or followed by another structure in the same phonological unit.

5. Boys speak more utterances and become more involved in mazes than girls of the same grade and same ethnic group do.

6. Negro children of Grade 4 speak fewer utterances than Caucasian children of either Grade 4 or Grade 6, and in the lower quartile become involved in fewer mazes than Caucasian children of Grade 4 do.

7. Children better endowed by having higher intelligence quotients, more highly educated parents, and higher family socio-economic status do not show any significant superiority in the use of the simplest, most basic language structures over children less endowed.

8. Fluency of use of language does not seem to be a reliable index of maturity of use of language.

CHAPTER IV

Findings: Patterns of Children's Oral and Written Language Compared--Level I

THE WRITTEN LANGUAGE

Children of Grade 4 have not mastered the mechanics of writing a sentence. A few of the pupils of this study wrote a series of independent clauses with no punctuation or capitalization to mark the end of one and the beginning of another. These produced an entire story in one long sentence. More pupils mixed correctly punctuated clauses with a series of unpunctuated clauses. Sometimes periods occurred in the middle of a clause but not at the end of a clause. Some of the periods in the middle of clauses were between words like the and man in the phrase the man, suggesting that what seemed to be a period might be a meaningless mark made as the child held his pencil on the paper while he thought about what to say next. Capitalized words appeared in the middle of sentences when there was no capitalization at the beginning of the sentences. There were a few cases of a story which was one long sentence composed of a series of independent clauses joined by and. This type of writing was very rare, though in other research many such sentences have been found in children's written language. The children of this study usually used and to join compound elements.

Juncture Errors

In the structural analysis of the children's language, clauses written as a single sentence and a series of clauses joined by and were treated as a single sentence. Nevertheless, it was felt that some recognition of the long sentence made of unpunctuated independent clauses should be made, so a count was made of juncture errors. The results of a tabulation of the frequency of juncture errors are shown in Table 24. The low quartile of Caucasian children has eliminated this error, and lack of recognition of the beginning and the end of a sentence is rare in the low quartile of Negro children, surprisingly more rare among Negro boys than Negro girls. In the high quartile, boys of Grade 4, both Caucasian and Negro, exceed girls in their failure to recognize the end of a sentence. Negro boys made the extremely high average of over twelve juncture errors per person. At the sixth-grade level, boys of the high quartile are only slightly inferior to girls. This change in the relative development in language of boys and girls between the fourth and the sixth grade raises the question of how much the whole superiority of girls to boys in use of written language is tied up with such a purely physical matter as muscular development. In other words, is the difficulty of writing so great for some boys that they cannot concentrate upon other matters when they are writing? If so, what is the effect upon their later use of language of their being constantly compared with girls as inferior? Is society's idea of what are boys' games and toys and what are girls' games and toys a cause of the development of precision in use of small muscles in girls and the lack of such development in boys?

Table 24. TOTAL AND AVERAGE NUMBER OF JUNCTURE ERRORS IN THE WRITTEN LANGUAGE OF HIGH AND LOW QUARTILES OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6

Quartile	Negro 4				Caucasian 4				Caucasian 6			
	Boys		Girls		Boys		Girls		Boys		Girls	
	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.
Lower	3	0.27	5	0.4	0	0.00	0	0.00	0	0.00	0	0.00
Higher	138	12.5	116	8.3	68	4.5	39	3.9	65	5.42	70	5.28

Comparative Length of Oral and Written Samples

As the children's oral language which was analyzed had been limited to twenty-five communication units for analysis, the children's written language which was analyzed consisted of twenty-five sentences, or independent clauses. These twenty-five units generally included the maximum output of written language of children of both Grade 4 and Grade 6, but twenty-five communication units of oral language were far fewer than most of the children spoke. Nevertheless, twenty-five units, whether of oral or written language, made about one double-spaced typewritten page of language. Because of this, a rough estimate of the relative quantity of oral and written language could be made. Table 25 is based on the following four categories into which the typewritten amount of language the child produced was divided: Category 1 is less than a half of a page; Category 2 is one-half of a page; Category 3 is three-fourths of a page; and Category 4 is a full page.

Table 25. AVERAGE LENGTH OF ORAL AND WRITTEN LANGUAGE SAMPLES FOR HIGH AND LOW QUARTILES OF GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6

Quartiles	Negro 4				Caucasian 4				Caucasian 6			
	Boys		Girls		Boys		Girls		Boys		Girls	
	O	W	O	W	O	W	O	W	O	W	O	W
Low	1.9	1.0	1.8	1.0	2.96	1.0	2.3	1.0	2.5	1.16	2.84	2.07
High	4.0	3.7	4.0	3.3	4.0	2.93	4.0	3.4	4.0	3.83	4.0	3.36

Even at sixth-grade level, in writing the kind of story they have been used to telling or writing from their earliest years, neither all of the high quartile of boys nor the high quartile of girls is able to produce a full page of writing. In the low quartile, only girls of Grade 6 are able to average as much as half a page of writing. In this low quartile, both Negro and Caucasian children of Grade 4 produce less than one-half page of written language though all of them were able to talk enough to produce at least half a page of oral language. The low quartile of boys of Caucasian Grade 4 were able to produce almost three-fourths of a page of oral language. In the high quartile, Negro boys of Grade 4 and Caucasian boys of Grade 6 produce, on the average, a little more writing than girls do. When it is remembered that a page of typed children's language is about 240 words, the amount written is not bad for children of Grade 4. Even a fourth of a page is about 60 words; a half of a page is about 120. If the children had written a series of short sentences like "We went on a trip. We saw some birds. We saw some trees," the whole twenty-five units to be analyzed would have amounted to less than half a page. A look at the amount written even by the lowest quartile shows that no large number of children wrote a story composed entirely of such unelaborated sentences.

In the high quartile Negro boys exceed Caucasian boys of Grade 4 in quantity of written language produced by a wide margin, the Negro boys writing almost a full page while Caucasian boys write only about three-fourths of a page. Negro boys also write more than Caucasian girls of both the fourth and sixth grades, and only slightly less than Caucasian boys of Grade 6. It seems, then, that in the high quartile Negro pupils, both boys and girls, are equal to or superior to Caucasian children of this study in fluency of language.

Average Sentence Length

To get the average sentence length of the language samples, the number of words in the first ten sentences either written or spoken were counted and divided by ten. Ten sentences were chosen in order to compare a like body of language. Choice of ten sentences also eliminated from the comparison any language samples composed entirely of independent units joined by and. A sentence in oral language was a phonological unit regardless of whether it was merely an utterance or not. In written language a sentence was whatever occurred between two periods with two exceptions. If a child put what looked like a period between the subject and predicate of his sentence, or between an adjective and the noun it modified, or between two of the parts of a compound verb, it was considered that he had inadvertently let his pencil touch the paper at that point. Also, if a child wrote a series of independent clauses that were obviously a series of independent sentences, they were edited into sentences. An example will show the only kind of editing allowed. The slanting marks show the segmentation into sentences.

> A man and a woman and a boy and a girl were in the car/ the boy was pointing at a rabbit/ we saw a deer and her baby/ father said do you see that owl/ mother said look at the sailboat on the lake.

Table 26 shows the average sentence length of pupils who spoke at least ten phonological units or wrote at least ten sentences. Of the 300 pupils in this study only three failed to speak ten phonological units. All of the three were pupils of Grade 4. Two of the three were from rural schools and one was from a school in a town of about 5,000 population. Two of the three were Negro and one was Caucasian. There were 33 out of the 300 who were unable to write ten sentences, 18 Caucasians and 15 Negroes. Eleven of the Negroes who could not write ten sentences were from the same rural school. Although 24 of the 36 pupils who could either not speak or not write ten sentences made scores below 100 on a test of verbal maturity, among those who could not write ten sentences, there were four whose scores on the test of verbal maturity put them in the highest quartile. Three of these were Caucasian pupils of Grade 6. These three were also from communities of over 10,000 population. Only 5 of the 33 pupils who could not write ten sentences were in Grade 6, and only 8 of the 33 were girls.

Table 26. MEAN SENTENCE LENGTH OF ORAL AND WRITTEN
LANGUAGE FOR HIGH AND LOW QUARTILES OF
GRADES NEGRO 4, CAUCASIAN 4, AND CAUCASIAN 6

Quartile	Oral						Written					
	Negro 4		Caucasian 4		Caucasian 6		Negro 4		Caucasian 4		Caucasian 6	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
High	13.4	12.8	13.6	14.3	16.5	15.8	13.4	12.6	13.5	13.4	16.7	15.8
Low	7.3	7.8	7.7	7.6	8.5	9.6	7.0	7.4	7.3	8.1	8.1	8.5

Table 26, then, is based on the oral language of 297 pupils, and the written language of 267 pupils. As shown in Table 26, Negro boys of the high quartile speak in longer phonological units than Negro girls, and Caucasian boys of Grade 6 in the high quartile speak in longer units than Caucasian girls of Grade 6. The low quartile for these two groups shows exactly the reverse. In it, the phonological units of the girls are longer than those of the boys. Caucasian girls of Grade 4 in the upper quartile speak in longer units than the boys of that quartile, but boys and girls of the low quartile of Caucasian Grade 4, speak in units of about the same length.

All boys of the upper quartile write longer sentences than girls of the same grade and same ethnic group do, but all girls of the lower quartile write longer sentences than boys of the lower quartile do. This relationship of the sexes when the length of their sentences is compared is the same relationship that has appeared in previous comparisons of the language characteristics of boys and girls in this study. When boys do well, they do better than the girls; when they do poorly, they are at the bottom of the heap.

In both length of sentence in written language and of length of phonological unit in oral language, children of Grade 6 show superiority to children of Grade 4. For the upper quartile, the superiority is marked; for the low quartile, it is not great.

Structures Most Used in Children's Written Language

Table 27 shows that the most obvious difference between the first twenty-five ranking structures of children's written language and the first twenty-five of their oral language is that in the written language there are no structures beginning with and. As was true in their oral language, the simple 124 (subject-predicate-direct object) type of sentence is in first place in children's written language, both in Grade 4 and Grade 6. The 12b5 structure (subject-linking verb-complement) is in second place in the writing of both Negro and Caucasian children of Grade 4, but has shifted to third place for Caucasians of Grade 6 in their written language. In second place for children of the sixth grade is $M_3$124 (movable of time plus subject-predicate-direct object). The high rank of this structure beginning with a movable of time is to be expected in narration where events are naturally organized in a time sequence. The difference in the relative rank of this structure as used by children of this study, from fourth place for Negro children of Grade 4, to third for Caucasian children of Grade 4, to second for children of Grade 6, may be a sign of feeling for or lack of feeling for organization of a piece of writing.

Table 27. RANK ORDER AND FREQUENCY OF STRUCTURES IN CHILDREN'S WRITTEN LANGUAGE

Structures	All		Caucasian 6		Caucasian 4		Negro 4	
	Rank	f	Rank	f	Rank	f	Rank	f
124	1	859	1	262	1	267	1	330
12b5	2	431	3	122	2	130	2	179
$M_3$124	3	312	2	127	3	117	4	68
12M_1	4	203	6	44	4	65	3	94
$M_3$12M_1	5	148	4	64	6	53	10	31
T124	6	135	5	46	8	39	5	50
2b1	7	133	12	22	5	64	6	47
12M_2	8	113	8	30	7	40	7	43
124+T	9	106	7	33	9	38	9	35
421	10	90	14	19	11	29	8	42
T12b5	11	85	9	28	10	36	15	21
12bM_1	12	69	17	15	13	25	12	29
2b1M_1	12	69	17	15	14	24	11	30
124M_1	13	63	14	19	15	23	15	21
12	14	61	18	14	15	23	13	24
$M_3$124+T	15	49	15	18	19	14	17	17
$M_1$2b1	15	49	11	24	13	25		
$M_3$12b5	16	48	13	21	20	13	20	14
1234	17	47	17	15	20	13	16	19
12b5+T	18	46	15	18	12	28		
$M_3$12M_2	19	41	10	26			19	15
124M_2	20	40	21	11	19	14	19	15
$M_1$124	21	38	14	19	17	19		
T12M_1	22	37	19	13	23	10	20	14
12+T	23	33	20	12	22	11	23	10

Tenth in rank is the structure 421, a reversed structure (direct object-predicate-subject). This structure is one of the structures of dialogue: "We must start home now," said mother. Its appearance in children's written language is probably due directly to the influence of their reading textbooks or storybooks in general, though dialogue of various patterns is also commonly used by people who have a story-teller's instinct for the dramatic. For Negro children of Grade 4, this structure is of eighth rank. Children of Grade 6 use it relatively little. Children of Grade 6 do not use as much dialogue in their stories as younger children do, and when they do use the direct words of speakers, they are inclined to write 124 structures instead of 421 structures.

Also noticeable in structures of the written language (Table 27) are those beginning with an expletive (2bl): "There was a man." This structure, both when it is the simple 2bl and when it contains a movable of place ($2blM_1$ or M_12bl) is used much more by pupils of Grade 4 than by those of Grade 6. Negro children, whose total number of structures is less than that of Caucasian children, use $2blM_1$ (where the movable is at the end of the sentence) proportionately much more than Caucasian pupils do. When the movable of place is at the beginning of the sentence (M_12bl), Caucasian pupils of Grade 4 and Grade 6 use it about an equal number of times, but Negro pupils do not use it enough to make it one of their first twenty-five most-used structures. Negro pupils also fail to use the M_1124 structure enough for it to be of high rank with them. The movable of time at the beginning of the sentence is not as natural a structure as the movable of time at the end of a sentence. "I saw Grandfather at the barn," is common speech; "At the barn, I saw Grandfather," is not. Use of M_1 at the beginning of a sentence, then, seems to be a written structure which Caucasian children of Grade 4 and Caucasian children of Grade 6 have learned to use to some extent, but Negro children of Grade 4 have not.

Comparison of the Most-Used Structures of Children's Oral and Written Language

Negro Grade 4

In order to compare the most-used structures of children's written language with the most-used structures of their oral language, three tables, each showing the rank and frequency of both oral and written structures for one of the three grades, Negro 4, Caucasian 4, and Caucasian 6, have been made. The first of these tables, Table 28, shows the structures used by Negroes of Grade 4. The most significant differences between Negro children's use of written and their use of oral language structures as shown in Table 28 are the following:

1. Negro children rarely begin a written sentence with and, and they do not write many long sentences in which several clauses are joined by and. The former is shown by no appearance of plus (+) structures in the much-used structures of their written language; the latter is shown in the reduction of the number of T structures in their written language.

2. Negro children's use of the linking verb 12b5 increases in their written language, as does the structure beginning with there followed by a part of the verb be which is followed by the subject (2bl).

3. To write is so much more difficult than to speak for these Negro children that in spite of the quasi-monologue which was the speaking situation, the number of structures spoken greatly exceeds the number written.

Caucasian Grade 4

Table 29 shows the most-used structures of the written and oral language of Caucasian pupils of Grade 4. Some of the differences between their oral and their written language are the same as those characteristic of the language

Table 28. WRITTEN AND ORAL LANGUAGE STRUCTURES COMPARED BY FREQUENCY AND RANK OF USE - NEGRO GRADE 4

Structures	Oral		Written		Structures	Oral		Written	
	f	Rank	f	Rank		f	Rank	f	Rank
12			24	13	$12bM_1$			29	12
12+T			10	23	12b5	51	6	179	2
+12+T	22	22			+12b5	44	10		
T12	51	6			12b5+T	16	26		
$12M_1$	55	5	94	3					
$+12M_1$	94	4			T12b5	39	13	21	15
$T12M_1$	50	7	14	20					
$12M_1+T$	31	15			1234			19	16
$+12M_1+T$	40	12			+1234	44	10		
$12M_2$	25	20	43	7					
$+12M_2$	27	18			2bl			47	6
					+2bl	23	21		
124	201	2	330	1	$2blM_1$			30	11
+124	220	1							
124+T	43	11	35	9	M_1124				
+124+T	46	9			M_12bl				
T124	142	3	50	5					
T124+T	19	23			M_312M_1	40	12	31	10
$124M_1$			21	15	$+M_312M_1$	47	8		
$+124M_1$	18	24			M_312M_2			15	19
$124M_2$			15	19	M_3124	35	16	68	4
					$+M_3124$	38	14		
					M_3124+T			17	17
					M_312b5			14	20
					421			42	8

of Negro pupils of Grade 4: decrease of the use of and to begin a sentence or to join many dependent clauses, decrease of the amount of language they are able to write compared with the amount they are able to speak, and increase of the structure 2bl. Other noticeable features are these:

1. There is no significant increase in the number of 12b5 structures in their written language as compared with the use of these structures in their oral language, but the ratio of 12b5 structures to other structures in the written language has increased.

2. There is a significant addition of structures beginning with a movable of place ($M_1$124 and $M_1$2bl) in their written language.

3. In their written language, Caucasian children of Grade 4 almost doubled the number of structures beginning with a movable of time (M_3) over the number of such structures used in their oral language. Though Caucasian children used fewer movables of time in their oral language than Negro children did, they have doubled their use of this structure in their written language while Negro children have not even used as many movables of time in their written language as they did in their oral language.

Caucasian Grade 6

The only marked difference in the relation of structures of the written language of Caucasian children of Grade 6 to their oral language structures that is not also a difference in the oral and written structures used by Caucasian children of Grade 4 is the decrease of the use of the structure 12b5 in the written language of Caucasian children of Grade 6.

Frequency of Structures as Used by High and Low Quartiles

A frequency distribution of the high and low quartiles of use of high-ranking structures of written language shows, as a similar table of distribution of the high-ranking structures of oral language did that even such a much-used

Table 29. WRITTEN AND ORAL LANGUAGE STRUCTURES COMPARED BY FREQUENCY AND RANK OF USE - CAUCASIAN GRADE 4

Structures	Oral		Written	
	f	Rank	f	Rank
12			23	15
12+T			11	22
+12+T	13	28		
T12	37	14		
$12M_1$	48	8	65	4
$+12M_1$	75	5		
$T12M_1$	46	9	10	24
$12M_1+T$	24	20		
$+12M_1+T$	31	17		
$12M_2$	22	21	40	7
$+12M_2$	21	22		
124	184	2	267	1
+124	248	1		
124+T	49	7	38	9
+124+T	38	13		
T124	139	3	39	8
T124+T	10	30		
$124M_1$			23	15
$+124M_1$	20	23		
$124M_2$			14	20
$12bM_1$			25	13
12b5	86	4	130	2
+12b5	61	6		
12b5+T	20	23	28	12
T12b5	40	11	36	10
1234			13	21
+1234	14	27		
2b1			64	5
+2b1	33	16		
$2b1M_1$			24	14
M_1124			19	18
M_12b1			25	13
M_312M_1	41	10	53	6
$+M_312M_1$	34	15		
M_312M_2			21	16
M_3124	33	16	117	3
$+M_3124$	39	12		
M_3124+T			14	20
M_312b5			13	21
421			29	11

Table 30. WRITTEN AND ORAL LANGUAGE STRUCTURES COMPARED BY FREQUENCY AND RANK OF USE - CAUCASIAN GRADE 6

Structures	Oral		Written	
	f	Rank	f	Rank
12			14	18
12+T			12	20
*12+T	20	21		
T12	35	14		
12M$_1$	41	11	44	6
*12M$_1$	54	7		
T12M$_1$	59	6	13	19
12M$_1$+T	26	17		
*12M$_1$+T	39	13		
12M$_2$	19	22	30	8
*12M$_2$	20	21		
124	121	3	262	1
*124	171	1		
124+T	52	8	33	7
*124+T	40	12		
T124	147	2	46	5
T124+T	23	19		
124M$_1$	23	19	19	14
*124M$_1$				
124M$_2$			11	21
124M$_3$			15	17
1245	108	4	122	3
*1245	45	10		
1245+T	33	16	18	15
T1245	70	5	28	9
1234			15	17
*1234	11	29		
241			22	12
*241	23	19		
241M$_1$			15	17
M$_1$124			19	14
M$_1$241			24	11
M$_2$12M$_1$	41	11	64	4
*M$_2$12M$_1$	34	15		
M$_2$12M$_2$			26	10
M$_2$124	26	17	127	2
*M$_2$124	49	9		
M$_2$124+T			18	15
M$_3$1245			21	13
421			19	14

structure as 124 is used almost entirely by only three-fourths of the children. Ten of the sixteen structures listed in the table are used by only one-fourth or about one-fourth of the children of a grade.

Negro Grade 4

Negro boys (Table 31) show a greater average use of the structure 124 in the high quartile than girls do, but individuals among Negro girls (Table 32) use the structure more times than any boy does. Each of six girls used it eleven times. Negro girls show a slightly greater use of this structure in the low quartile than boys do, but not a significant one.

Negro girls show pronounced superiority in average use of 12b3 and T12b3 over Negro boys; however, single individuals among both boys and girls account for an unusually high number of uses of the 12b3 structure. Boys' use of 12b3 is not as concentrated in single individuals as that of girls, some of whom seem to have fallen into a monotonous pattern of expression.

The use of $M_3$124 ("Then we went to the lake") and 12M_1 ("I went into the old house") averages about the same for both sexes. The common introductory sentence used by children in writing the composition from which these structures were taken was the $M_3$12M_1 structure ("Last year we went to see my Grandmother"). The average use of this structure by boys is slightly higher than use of it by girls. Girls, having used the structure, did not repeat it as much as boys did except for one girl who used it four times.

In the high quartile, Negro girls use the 2b1 structure ("There were beautiful flowers" or "There were a deer and her two fawns") more than boys do. When the movable of place (M_1) is added to this structure, making the structure 2b1M_1 ("There were three deer in the forest"), the average use of it by girls is double the use by boys.

Girls of the high quartile also show a slightly greater average frequency

Table 31. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF NEGRO BOYS, GRADE 4 - WRITTEN LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
124	H					2	3	2	1	1	1	1		69	6.3
	L	8	3											3	0.3
12b5	H			6	2		2		1					35	3.2
	L	11												0	0.0
$N_3$124	H		4	3	3	1								23	2.1
	L	11												0	0.0
12N_1	H			6	3	2								29	2.6
	L	11												0	0.0
$N_3$12N_1	H		7	4										15	1.4
	L	11												0	0.0
T124	H		8	3										14	1.3
	L	11												0	0.0
2b1	H	4	2	2	1	1	1							16	1.4
	L	11												0	0.0
12N_2	H	1	5	5										15	1.4
	L	11												0	0.0
124+T	H		9	2										13	1.2
	L	11												0	0.0
421	H	6	1	3	1									11	1.0
	L	11												0	0.0
T12b5	H	3	8											8	0.7
	L	11												0	0.0
12bN_1	H	1	9	1										11	1.0
	L	11												0	0.0
2b1N_1	H	8	2			1								6	0.5
	L	11												0	0.0
124N_1	H	5	5		1									8	0.7
	L	11												0	0.0
12	H	1	8	1	1									13	1.2
	L	11												0	0.0
$N_3$124+T	H	5	5	1										7	0.6
	L	11												0	0.0

Table 32. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF NEGRO GIRLS, GRADE 4 - WRITTEN LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
124	H							3	2	1	2		6	69	4.9
	L	9	5											5	0.4
1245	H				3	3	4	1			1		2	78	5.6
	L	14												0	0.0
N_3124	H		1	9	4									31	2.2
	L	14												0	0.0
$12N_1$	H			8	5	1								35	2.5
	L	14												0	0.0
N_312N_1	H	2	10	1		1								16	1.1
	L	14												0	0.0
T124	H		3	8	2		1							30	2.1
	L	14												0	0.0
2b1	H		5	6	2		1							28	2.0
	L	14												0	0.0
$12N_2$	H		8	4	2									22	1.6
	L	14												0	0.0
124+P	H		8	4	2									22	1.6
	L	14												0	0.0
4P1	H	6	5			[illegible]	[illegible]							[illegible]	[illegible]
	L	14												0	0.0
T1245	H		14											14	1.0
	L	14												0	0.0
$12bN_1$	H	3	7	2			2							21	1.5
	L	14												0	0.0
$2b12N_1$	H		9	1		2	2							29	2.1
	L	14												0	0.0
$124N_1$	H	3	10		1									13	0.9
	L	14												0	0.0
12	H	3	9	1	1									14	1.0
	L	14												0	0.0
N_3124+P	H	10	3				1							8	0.6
	L	14												0	0.0

of use of the structure of dialogue, 421, ("'We are going to swim now,' said Father"), but the high average is due to the use of this structure five times by one individual and four times by each of two others. No boy used the structure over three times in his composition.

Caucasian Grade 4

Except for the use of 124 and T124, both of which Caucasian boys of Grade 4 use more than girls do, and the use of 12b5 and $12M_2$ ("He ran as fast as he could"), which the two sexes use the same on an average, girls exceed boys in the use of all high-ranking structures. The superiority of use of structures by girls is marked in the 2b1, $2b1M_1$, and 421 structures just as it was in the case of Negro girls of Grade 4.

Caucasian Grade 6

At the sixth-grade level, the average use of selected ranking structures by boys and girls is nearer the same than at fourth-grade level. There is more use of 12b5 by girls than by boys in the high quartile. Though there is slightly more use of 2b1 and 421 by girls, there is not enough difference to be significant.

While these tabulations of written structures, in general, show superiority of girls over boys in the use of linking verb structures in their written language, these tabulations of the frequency of use of structures are more important in showing how dangerous it is to draw conclusions about the use of a single structure by a whole grade or ly one sex, and what an individual matter a single composition is even for children of Grade 4. Both these tables of frequency of written structures and the ones showing the frequency of oral structures (p. 61ff.) emphasize how little part any one structure, even the structure 124, plays in the structural repertoire of a hundred children.

Table 33. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN BOYS, GRADE 4 - WRITTEN LANGUAGE

		Frequency of Structures										
		0	1	2	3	4	5	6	7	8	Total	Average
124	H				1	5	2	5	2		77	5.1
	L	7	8								8	0.5
1245	H		1	4	4	3	2	1			49	3.3
	L	15									0	0.0
$M_3$124	H			8	3	2	2				43	2.9
	L	15									0	0.0
12M_1	H		7	4	2	2					29	1.9
	L	15									0	0.0
$M_3$12M_1	H		11	3	1						20	1.3
	L	15									0	0.0
T124	H		10	3	1	1					23	1.5
	L	15									0	0.0
2+1	H		9	4	1			1			26	1.7
	L	15									0	0.0
12M_3	H		11	4							19	1.3
	L	15									0	0.0
124+T	H		12	1	2						20	1.3
	L	15									0	0.0
421	H	11	1	2			1				10	0.7
	L	15									0	0.0
T1245	H	3	7	5							17	1.1
	L	15									0	0.0
12MM_1	H	6	8	1							10	0.7
	L	15									0	0.0
2+12M_1	H	5	7	2		1					15	1.0
	L	15									0	0.0
124M_1	H	1	10	4							18	1.2
	L	15									0	0.0
12	H	7	7	1							9	0.6
	L	15									0	0.0
$M_3$124+T	H	7	7	1							9	0.6
	L	15									0	0.0

Table 34. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN GIRLS, GRADE 4 – WRITTEN LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
124	H					3	3	2				2		49	4.9
	L	6	4											4	0.4
12b5	H			3	4	1	1	1						33	3.3
	L	10												0	0.0
M$_3$124	H			3	3	3	1							32	3.2
	L	10												0	0.0
12M$_1$	H		6	2		1		1						20	2.0
	L	10												0	0.0
M$_3$12M$_1$	H		2	7	1									19	1.9
	L	10												0	0.0
T124	H		7	3										13	1.3
	L	10												0	0.0
2b2	H			5	3	1		1						26	2.6
	L	10												0	0.0
12M$_2$	H		7	3										13	1.3
	L	10												0	0.0
124+T	H		6	3	1									15	1.5
	L	10												0	0.0
421	H	4	2	1	3									13	1.3
	L	10												0	0.0
T12b5	H		6	3	1									15	1.5
	L	10												0	0.0
12bM$_1$	H	4	3	2	1									10	1.0
	L	10												0	0.0
2b12M$_1$	H		3	4		1	1		1					24	2.4
	L	10												0	0.0
124M$_1$	H	6	3	1										5	0.5
	L	10												0	0.0
1	H		9	1										11	1.1
	L	10												0	0.0
M$_3$124+T	H	8	2											2	0.2
	L	10												0	0.0

Table 35. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN BOYS, GRADE 6 - WRITTEN LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
124	H					4	3	2		1		2		71	5.9
	L	10	2											2	0.2
12h5	H			7	4	1								30	2.5
	L	12												0	0.0
$M_3$124	H			7	3	2								31	2.6
	L	12												0	0.0
12M_1	H		7	4		1								19	1.6
	L	12												0	0.0
$M_3$12M_1	H		8	3	1									18	1.5
	L	12												0	0.0
T124	H	3	5	3	1									14	1.2
	L	12												0	0.0
2h1	H	5	6	1										8	0.7
	L	12												0	0.0
12M_2	H	2	9		1									12	1.0
	L	12												0	0.0
124+T	H	3	5	4										13	1.1
	L	12												0	0.0
421	H	7	3	1		1								9	0.8
	L	12												0	0.0
T12h5	H	3	7	2										11	0.9
	L	12												0	0.0
12hM_1	H	6	4	2										8	0.7
	L	12												0	0.0
2h12M_1	H	7	4		1									7	0.6
	L	12												0	0.0
124M_1	H	3	7	2										11	0.9
	L	12												0	0.0
12	H	6	6											6	0.5
	L	12												0	0.0
$M_3$124+T	H	3	7	2										11	0.9
	L	12												0	0.0

Table 36. FREQUENCY OF SELECTED STRUCTURES FOR HIGH AND LOW QUARTILES OF CAUCASIAN GIRLS, GRADE 6 - WRITTEN LANGUAGE

		Frequency of Structures													
		0	1	2	3	4	5	6	7	8	9	10	11	Total	Average
124	H				2	3	2	2		1	2			72	5.5
	L	10	3											3	0.2
12b5	H			6	3	2	1		1					41	3.2
	L	13												0	0.0
$M_3$124	H			6	4	3								36	2.8
	L	13												0	0.0
12M_1	H		9	3	1									18	1.4
	L	13												0	0.0
$M_3$12M_1	H		8	4	1									19	1.5
	L	13												0	0.0
T124	H		9	2	2									19	1.5
	L	13												0	0.0
2b1	H	1	10	2										14	1.1
	L	13												0	0.0
12M_2	H		12	1										14	1.1
	L	13												0	0.0
124+T	H	2	9	1		1								15	1.2
	L	13												0	0.0
421	H	9	2		1		1							10	0.8
	L	13												0	0.0
T12b5	H	1	11		1									13	1.0
	L	13												0	0.0
12bM_1	H	8	4	1										6	0.5
	L	13												0	0.0
2b12M_1	H	5	8											8	0.6
	L	13												0	0.0
124M_1	H	6	7											7	0.5
	L	13												0	0.0
12	H	6	7											7	0.5
	L	13												0	0.0
$M_3$124+T	H	7	6											6	0.5
	L	13												0	0.0

Comparison of Total Oral and Written Structural Patterns

When the total number of structural patterns used in oral language (Table 18, p. 67), and the total used in written language are compared, there is overwhelming evidence of the structural variation children are able to use in their oral language which they are unable to carry over into their written language. The total number of different oral language structures is almost twice as great as the total number of written structures for children of both Caucasian Grade 4 and Grade 6. For children of Negro Grade 4, it is one and a half times greater. In both oral and written language, the number of structures used only once is between 60 percent and 70 percent of the total output. Though Negro children use fewer total structures in both oral and written language, the difference between the number they use in written language and the number used by Caucasian children of Grade 4 is only 27. In oral language, the difference is 128.

Table 37. TOTAL DIFFERENT STRUCTURES AND FREQUENCY
OF USE OF STRUCTURES IN THE WRITTEN
LANGUAGE OF PUPILS OF GRADES NEGRO
4, CAUCASIAN 4, AND CAUCASIAN 6

Grade	Total Number	Frequency of Use							
		1 Time		2-4 Times		5-10 Times		Over 10	
		No.	%	No.	%	No.	%	No.	%
Negro 4	344	207	60.0	77	22.0	30	8.7	30	8.7
Caucasian 4	371	243	65.0	67	18.0	30	8.0	31	8.0
Caucasian 6	527	364	69.0	92	17.4	30	5.6	40	7.5

Children of Grade 6 use 132 more structures than Caucasian children of Grade 4 in oral language and 156 more in written language, partly because children of Grade 6 can write more than children of Grade 4, but also, especially in oral language, because children of Grade 6 do not have to rely as heavily on a few common structures as children of Grade 4 do.

Though the percent which the structures used one time is to the total output of structures does not vary much from grade to grade in children's oral language, in their written language, there is a steep increase in the percent of structures used only one time from Negro Grade 4 to Caucasian Grade 4 to Caucasian Grade 6. In their oral language, Caucasian children of Grade 6 show more repetition of a structure from two to four times than any of the children of Grade 4 do, and Negro children show less repetition two to four times in relation to their total structures than other children do. This, together with the Negro children's large number of repetitions 5 to 10 times and over 10 times, and the smaller number of such repetitions by pupils of Grade 6, indicates, as the number of their different structures did, that though pupils of Grade 6 repeat many structures in their oral language, they are not nearly so dependent upon a few structures in their writing as the other children of this study, and that Negro children of Grade 4 have the most limited repertoire of any children in this study.

In repetition of structures in written language, pupils of Negro Grade 4 exceed Caucasian pupils of Grade 4, and Caucasian pupils of Grade 4 exceed Caucasian pupils of Grade 6 in every category: 2 to 4 times, 5 to 10 times, and over 10 times. The percentage of repetition of a structure over 10 times in written language is not much less for Grade 6 than for Grade 4, but sixth-grade pupils repeat only 5.6 percent of their structures 5 to 10 times compared to repetition of 8 percent of their structures 5 to 10 times by pupils of Caucasian Grade 4 and 8.7 percent by pupils of Negro Grade 4.

The greater ease with which all pupils speak when compared with the ease with which they write is seen in the greater percent of structures repeated over 10 times in children's written language compared to the percent repeated over 10 times in their oral language. In general, these tables show that Negro children of Grade 4 have the least dexterity in use of varied language structures in both their oral and written language, and that Caucasian pupils of Grade 6 have the most.

Comparison of Total Structures Used

Table 38 is a tabulation of the frequency with which structures were built on selected basic patterns such as 12, 124, and 1245. It also shows the total structural units used by the pupils of each grade in this study except for a few minor patterns which were used so rarely that all of them together would make about one percent of the total. These minor patterns are such patterns as 24, actually an utterance, and all reversed structures except 421. The grand total of structural units of oral language for Negro pupils is 2,728 and for Caucasian pupils of the same grade only 2,520, a difference of about 200 units more for Negro pupils than for Caucasian. Yet Negro pupils used only 585 different structures to Caucasian pupils' 713 different structures, and Negro pupils' oral language samples were shorter. The differential between 585 and 2,728 for Negro pupils and between 713 and 2,520 for Caucasian pupils reinforces the previous conclusion that Negro pupils repeat a few structures much more than Caucasian children do, and that the structural units of Caucasian children are longer than those of Negro children.

The differential between the 845 different structures and the 3,004 units for Grade 6, and the fact that pupils of Grade 6 produce more oral language than Caucasian pupils of Grade 4 seems to indicate that children of Grade 6 in this study repeat structures in their oral language with about

Table 30. FREQUENCY WITH WHICH STRUCTURES WERE BUILT ON SELECTED BASIC PATTERNS - TOTAL UNITS

Basic Structure	Caucasian 6				Caucasian 4				Negro 4			
	Written		Oral		Written		Oral		Written		Oral	
	f	%	f	%	f	%	f	%	f	%	f	%
12	674	36.1	1070	35.6	530	29.8	952	37.8	417	23.7	1004	36.9
124	706	37.8	1272	42.3	694	39.0	945	38.0	741	42.0	1185	43.4
12b5	289	15.5	395	13.1	287	16.1	320	12.7	332	18.8	234	8.6
1234	31	1.7	75	2.5	27	1.5	60	2.4	33	1.9	150	5.5
12b	44	2.4	73	2.4	39	2.2	53	2.1	45	2.6	40	1.5
2b1	102	5.5	119	4.0	174	9.8	190	7.5	154	8.7	115	4.2
421	20	1.1			29	1.6			42	2.4		
Totals	1866		3004		1780		2520		1764		2708	

the same frequency as children of Grade 4 do.

When the total units for the written language are considered, the differential between the number of different structures and the total number of structures produced by children of Negro Grade 4 and Caucasian Grade 4 does not seem to have much significance. The differential between the number of different structures and the total structural units in the written language of children of Grade 6 plus the fact that they produce more written language simply shows again that pupils of Grade 6 find writing much easier than pupils of Grade 4 do.

As has been mentioned previously, Hook and Mathews in their book, American English, set up some norms for adult use of basic structures. Though these norms were based upon writing that was non-fiction, much such writing contains narrative passages, and since children's narrations can hardly be called fiction in the ordinary sense, it seems worthwhile to compare children's use of basic structures of English as shown in Table 38 with the adult norms of Hook and Mathews. For adults, it was found that the 12 structure makes up about 30 percent of the total writing output of adults; 124 about 38 percent; 12b3 (Hook and Mathews have divided this structure into two, one being the pattern in which the linking verb is followed by a noun, and the other being the pattern in which the linking verb is followed by an adjective. In this study, the two have been combined because the structure 12b3 in this study describes both.) about 27 percent, and the sentence beginning with the expletive, 2b1, about 5 percent. Only the written language of children is compared with these adult norms. The results of the comparison are these:

1. Children of Grade 6 exceed the norm in their use of the 12 structure; children of Caucasian Grade 4 just about equal it, and Negro children fall

far below the norm in their use of it. Since the 12 structure can be either the very childish "He cried," or a greatly elaborated structure, it is difficult to draw any conclusions about this spread in its use.

2. The 12b structure is the favorite of Grade 4. Negro pupils exceed adult use of this structure by about 4 percent, Caucasian pupils of Grade 4 by about 1 percent, and Caucasian pupils of Grade 6 just about equal it.

3. The recurring evidence that use of 12bj is a mark of maturity in language development is assisted by the failure of any of the children of this study to come near the 27 percent use of it by adults. Even when the percent of use of 12b by children of this study is added to their use of 12bj, their frequency of use is not much improved. The group which comes nearest to the adult norm is Negro Grade 4. The farthest away from the norm is Caucasian Grade 6. Because Negro children of Grade 4 use this structure more than Caucasian children of Grade 6, it is possible that under some circumstances, 12bj is a sign of immaturity in use of language rather than maturity. Such a circumstance may be the narrative type language situation used in this study.

4. Both pupils of Negro Grade 4 and Caucasian Grade 4 exceed the adult norm of 5 percent in their use of the sentence beginning with an expletive. This excessive use of the sentence beginning with an expletive is partly the result of the lack of inventiveness which caused many children to write stories enumerating the things they saw in the picture which was the inspiration for their writing in short sentences like these: "There is an owl. There is a deer with a fawn. There is a snake crossing the road." This 2bl structure may also be an important part of the dialect of the children of this area.

SUMMARY

1. The lower quartile of Caucasian children do not make juncture

errors in their written language, and the lower quartile of Negro children of Grade 4 make very few. In the upper quartile, boys of Grade 4 make more juncture errors than girls do, and Negro boys make the most of all. Boys of Grade 6 make only slightly more juncture errors than girls of that grade do.

2. In mere amount of written language produced, Negro children are equal to or superior to Caucasian children of Grade 4. Negro boys in the upper quartile produce more written language than any other children in this study except Caucasian boys of Grade 6, and they greatly exceed the amount Caucasian boys of Grade 4 are able to produce. In both written and oral language, Negro children are fluent, but their fluency is a matter of much repetition of a few structures.

3. By Grade 4, both Negro and Caucasian children show that they see writing as a different activity from speaking by adding the NCl structure of dialogue to their repertoire of structures. Caucasian children of Grade 4 also use structures beginning with the movable of place more often than they did in their oral language.

4. Pupils of Grade 6 both speak in longer phonological units and write in longer sentences than pupils of Grade 4 do.

5. In almost every aspect of use of language seen so far, boys show more spread of ability than girls: in the low quartile they are often lowest, in the high quartile, they are often highest.

6. Children use great structural variation in their oral language which they are unable to carry over into their written language.

7. Even by Grade 4, the relative percent of the use of the chief written sentence patterns of American English by children in their narrations is close to the relative use of these structures in the non-fiction of adults who write *for* newspapers, magazines, etc. The widest difference is in the use of the linking verb structure which children use much less than adults do, and in children's excessive use of the structure beginning with an expletive.

CHAPTER V

Findings: Movables in Children's Oral and Written Language--Level I

FREQUENCY OF USE

The movables to be discussed in this chapter are those more or less movable elements of the sentence commonly called adverb of place (M_1), adverb of manner (M_2), adverb of time (M_3), adverb of cause and condition (M_4), and the indirect object expressed with a preposition (M_5).

A comparison of the frequency of use of movables in children's oral and written language gives additional evidence of the difficulty children have in writing compared with speaking. In general, the number of movables used by children in their spoken language exceeds the number used in their written language. Because the oral language samples are longer than the written samples, a comparison of the use of movables in the written and spoken language is probably best made through a comparison of the percentage of use of a single movable to the use of all movables in either the written or the oral language.

Table 39. FREQUENCY AND PERCENT OF USE OF FIVE TYPES OF MOVABLES IN THE ORAL LANGUAGE OF NEGRO GRADE 4, CAUCASIAN GRADE 4, AND CAUCASIAN GRADE 6

	Negro Grade 4				Caucasian Grade 4				Caucasian Grade 6			
	Boys		Girls		Boys		Girls		Boys		Girls	
	f	%	f	%	f	%	f	%	f	%	f	%
M_1	342	40	469	43	507	39	351	42	473	41	505	40
M_2	150	18	176	16	274	21	151	19	262	22	234	18
M_3	304	36	332	31	448	34	265	32	351	30	452	36
M_4	39	5	81	7.5	68	5	50	6	65	6	67	5
M_5	8	.9	22	2.5	17	1	3	.4	14	1	15	1

Table 40. FREQUENCY AND PERCENT OF USE OF FIVE TYPES OF MOVABLES IN THE WRITTEN LANGUAGE OF NEGRO GRADE 4, CAUCASIAN GRADE 4, AND CAUCASIAN GRADE 6

	Negro Grade 4				Caucasian Grade 4				Caucasian Grade 6			
	Boys		Girls		Boys		Girls		Boys		Girls	
	F	%	F	%	F	%	F	%	F	%	F	%
M_1	241	40	300	44	279	38	223	42	267	33	239	31
M_2	110	19	128	19	146	20	101	19	162	20	169	21
M_3	194	33	212	31	267	37	180	35	320	39	323	39
M_4	39	7	36	5	30	4	25	5	54	7	68	8
M_5	7	1	4	.6	3	.4	3	.5	3	.4	6	.7

The percent of use of the movable of place (M_1) by Negro boys of Grade 4 is exactly the same for their oral language and their written language, but the percent of use of this movable of place rises a little for Negro girls in their written language. Both Negro boys and Negro girls use M_2, the movable of manner, more in relation to their use of all movables in written language than they do in their oral language. The percent of use of the movable of time (M_3) decreases in the written language of Negro boys, but remains the same for Negro girls as it was in their oral language. The percent of use of the movable of time in comparison with the percent of use of other movables is greater for Negro boys than for Negro girls in both oral and written language. Since the movable of time is frequently a single word, and usually the word then when it is used by these children, the higher percent of boys' use of it in oral language does not show much sophistication in language. Nevertheless, because use of the movable of time in a narration is connected with some feeling of the structure of narration which proceeds in time, use of it does show recognition of the logic of the narrative process.

Negro girls show an unusually high percent of use of the movable of cause and condition (M_4), and the indirect object expressed with a preposition (M_5) in their oral language. It is hard to account for this unusual use of these two movables, especially since their use is not a matter of a single individual's using them an unusual number of times. Only 17 of the 57 girls in the group did not use M_4. Twenty of them used it once, and two used it twice. Thirteen girls used M_5, each using it one time apiece.

The frequency distribution of the use of movables for Negro boys and Negro girls (Tables 41 and 42) shows the wide spread in the amount of their use of M_1 and M_3 (place and time). As has been the case with Negro boys in nearly all the studies of language made during this research, their spread of use is greater than that of girls. In a single composition, one boy uses 19 movables of time, and another 17. There is more concentration of use of this movable from one to six times in their written than in their oral language. Though only 4 Negro boys do not use M_3 at all in written language, 12 Negro girls do not use it. Despite the high use of the movable of cause (M_4) by Negro girls in their oral language, 56 out of the 57 do not use it in their written language. Negro boys seem to use these less common movables (M_4 and M_5) in their written language more than Negro girls do.

The tables of percent of use of movables (Tables 39 and 40) show Caucasian boys of Grade 4 using the movable of place (M_1) less and the movable of manner (M_2) more than Caucasian girls of Grade 4 do in both their written and their oral language. Other researchers have suggested that decrease of use of the movable of place and increase of the movable of manner are marks of maturity in the use of language. In spite of the apparent trend toward maturity of use of language by Caucasian boys as shown in the percent of the use of these movables by the whole group, the table of distribution

Table 41. FREQUENCY DISTRIBUTION OF USE OF NOMINALS BY NEGRO BOYS OF GRADE 4 IN THEIR WRITTEN AND ORAL LANGUAGE

	N_1		N_2		N_3		N_4		N_5	
f	O	W	O	W	O	W	O	W	O	W
00	1	2	2	10	1	4	18	26	30	30
01		1	3	11	1	6	13	9	3	3
02	1	3	8	3	4	4	11	3	1	2
03	2	8	9	6	1	8		2	1	
04	3	3	4	2	4	4	1	1		
05	1	3	6	3	4	3		1		
06	3	2	4	3	8	3				
07	9	1	4	1	1					
08	3	3	1	1		2				
09	4	3		1	2	1		1		
10	9	1			1	1				
11	2	1			4	2				
12	1	2			1	1				
13	1				2					
14	1	1			2	2				
15	1	1			1					
16	1									
17					1					
18										
19					1					
20										
21										

Table 40. FREQUENCY DISTRIBUTION OF USE OF MOVABLES BY NEGRO GIRLS OF GRADE 6 IN THEIR WRITTEN AND ORAL LANGUAGE

	M_1		M_2		M_3		M_4		M_5	
f	O	W	O	W	O	W	O	W	O	W
00		1	6	12	1	14	17	26	14	23
01	1	5	12	13	3	7	20	11	9	4
02	1	6	9	10	8	8	10	7	1	
03	3	12	8	11	5	5	5	1	2	
04	3	5	7	4	9	2	2	2		
05	6	4	8	2	8	8	2		1	
06	7	2	2	3	4	2				
07	6	1	3	1	3	6				
08	4	8			2		1			
09	9	7	1		7	1				
10	2	2				1				
11	8			1		1				
12	2	1	1		2	2				
13	3				1					
14	1				2					
15	3	1			1					
16					1					
17										
18										
19										
20										
21										

of boys' use of these adverbials (Table 63) shows that 7 Caucasian boys out of 60 did not use M_2 at all in their written language compared with only one Caucasian girl (Table 64) out of 60 who did not. There is slightly more excessive use of this adverbial of manner by a few boys than is the case in its use by girls.

In their written language, both Caucasian girls and boys use fewer adverbials of cause and condition (M_4) than Negro children do; however, the adverbial of cause and the direct object expressed with a preposition (M_5) are not used much by any of the children in this study.

The percentage of decrease in the use of the adverbial of place by pupils of Grade 6 as compared with its use by pupils of Grade 4 is marked. There is not, however, an accompanying increase in the use of the adverbial of manner. The tables showing the frequency distribution of the adverbial of place as used by pupils of Grade 6 (Tables 57 and 58) points up how really significant the decrease of this adverbial in narratives by sixth-graders is. Since a single girl accounts for 20 instances of the use of this adverbial, and a single boy for 21, the decrease of the use of this adverbial by most children at sixth-grade level is further supported.

At sixth-grade level, there is also a sharp increase percentagewise for both boys and girls in the use of the adverbial of time in their written language over the use of it in their oral language. The increase in percent of use of the adverbial of time in relation to the use of other adverbials in written language is greater for boys than for girls. The increase of this adverbial seems to be additional evidence that children of Grade 6 are more aware than younger children are of the necessity for organization of a composition; and although organization in time is perhaps the simplest and first-mastered of organizations, growth in use of it can be equated with maturity.

Table 43. FREQUENCY DISTRIBUTION OF USE OF MOVABLES BY CAUCASIAN BOYS OF GRADE 4 IN THEIR ORAL AND WRITTEN LANGUAGE

	M_1		M_2		M_3		M_4		M_5	
f	O	W	O	W	O	W	O	W	O	W
00		2	1	9	2	5	21	36	46	57
01	1	4	7	13	4	4	20	19	13	3
02	3	8	10	13	1	11	10	4	1	
03	1	10	10	10	3	5	6	1		
04	4	8	7	5	2	8	2			
05	2	9	5	6	4	9	1			
06	4	4	7	3	12	4				
07	8	7	4		6	6				
08	4	2			4	5				
09	7	3	3	1	2	1				
10	6	1	2		6					
11	8	1	1		2					
12	1		3		5	2				
13	3				2					
14	1				3					
15	3	1			1					
16	1				1					
17	1									
18	1									
19	1									
20										
21										

Table 44. FREQUENCY DISTRIBUTION OF USE OF MOVABLES BY CAUCASIAN GIRLS OF GRADE 4 IN THEIR ORAL AND WRITTEN LANGUAGE

	M_1		M_2		M_3		M_4		M_5	
f	O	W	O	W	O	W	O	W	O	W
00		1	2	1		2	14	28	37	37
01		2	5	12		6	13	6	3	3
02	1	2	5	11	2	7	8	3		
03		6	7	9	4	3	2	1		
04	1	9	8	1	4	6	1	1		
05	4	1	5	3	5	5	1			
06	3	8	1	1	7	4	1	1		
07	4	2	3	1	3					
08	5	3	1	1	3					
09	8	1	2		7					
10	4	1			2	1				
11	3	1			2					
12	3					2				
13		2	1			3				
14										
15	1					1				
16	2	1			1					
17	1									
18										
19										
20										
21										

Table 45. FREQUENCY DISTRIBUTION OF USE OF MOVABLES BY CAUCASIAN BOYS OF GRADE 6 IN THEIR ORAL AND WRITTEN LANGUAGE

	M_1		M_2		M_3		M_4		M_5	
f	O	W	O	W	O	W	O	W	O	W
00		1		4	1	1	14	17	35	44
01		4	1	6		1	16	14	10	3
02		4	5	7		7	8	11	2	
03	1	2	5	12	4	4	5	3		
04	1	6	5	4	4	2	2	1		
05	3	5	6	4	3	4	2	1		
06	3	7	6	3	8	3				
07	6	5	11	4	5	5				
08	5	3	2	3	7	3				
09	6	3	4		6	4				
10	5	3	1		1	6				
11	2	2	1		2	2				
12	5	1			2	1				
13	5					2				
14	2				2	1				
15					1					
16					1					
17	2									
18						1				
19	1									
20										
21		1								

Table 46. FREQUENCY DISTRIBUTION OF USE OF MOVABLES BY CAUCASIAN GIRLS OF GRADE 6 IN THEIR ORAL AND WRITTEN LANGUAGE

	M_1		M_2		M_3		M_4		M_5	
f	O	W	O	W	O	W	O	W	O	W
00		3		3		2	19	24	43	47
01	1	2	1	11	1	2	14	12	6	6
02	2		5	10		6	9	5	3	
03	2	3	16	8	4	4	9	6	1	
04		15	11	6	1	2	2	4		
05	5	5	8	9	4	11				
06	6	4	6	3	8	8		1		
07	5	7	2	1	7	2		1		
08	4	6		1	6	5				
09	4	2	1		3					
10	2	1	2		5	1				
11	4	3			1	3				
12	4	1	1		5	5				
13	6				1	1				
14	2	1		1						
15	2				4					
16	2				2	1				
17	1				1					
18										
19										
20	1									
21										

The frequency distribution of this movable of time shows concentration of use around 5 to 9 times per individual, a use that may have structural significance. Whether these signals of movement in time are mere repetitions of a word like then, or more sophisticated time signals is not shown at this first level of analysis.

In their oral language, the distribution of the use of the movable of manner is heaviest for girls of Grade 6 between 2 to 7 times, but its greatest concentration in their written language is 1 or 2 times, with some concentration in use 5 times. For boys of Grade 6, the concentration of use of the movable of manner in oral language is heaviest at 7 times, in written language at 3 times. In their written language, the distribution of use of this movable by boys is superior to that of its use by girls. No boy uses it over 8 times, but one girl uses it 14 times.

Boys of Grade 6 also show a better distribution of use of the movable of cause and condition (M_4). Of 47 boys, only 14 do not use it at all in their oral language, while of 53 girls, 19 do not use it. In their written language, only 17 boys do not use M_4, while 24 girls do not.

This association between language structure and thought processes is probably the most significant aspect of the study of the use of structures of language. It needs to be much more explored. It may be that boys' supposed inferiority in use of language is largely a matter of teachers' putting emphasis upon and rewarding mere fluency at which girls excel, and at which this study shows Negro children sometimes excel Caucasian children of the same grade.

These tables show the following pattern of use by grade. At fourth-grade level, the movable of place (M_1) is most used. It is closely followed by the movable of time (M_3). In third place is the movable of manner (M_2).

but there is a sharp decrease in its use as compared with the use of M_1 and M_3. An even sharper decrease in use takes place between the use of the movable of manner and the movable of cause and condition (M_4). With pupils of Grade 6, the movable of time (M_3) is the favorite in narration. Pupils of Grade 6 also show an increase in the use of the movable of manner over its use by pupils of Grade 4. There is not much difference between the use of the movable of cause and condition by pupils of Grade 6 and by those of Grade 4. Pupils of Grade 6 use the indirect object expressed with a preposition fewer times than pupils of Grade 4 do.

Movables and Mother's Education

Mario Pei, in his book, The Story of Language, says that our language is the language of our mothers because it is the mother of a child who talks to him in his pre-school years and nourishes his language growth. The quality of her adult language, then, gives him the structural equipment of language with which he starts to school. If this is true, it follows that an educated mother ought to give her children a pattern of superior language use which would show when children's use of movables is tabulated after they have been classified according to the education of their mothers. Tables 47-49 show such a tabulation for the pupils in this study. For the purpose of comparison, the mothers were divided into three categories: Category 1, those who had attended school through Grade 8; Category 2, those who had attended school from Grades 9 through 12; and Category 3, those who had gone to college or graduate school.

For all of the children of Grade 4 except Caucasian boys, Category 3 described the education of so few mothers that averages in that category do not have much significance.

In their oral language Negro girls whose mothers attended high school

Table 47. FREQUENCY AND AVERAGE USE OF MOVABLES BY NEGRO PUPILS OF GRADE 4 WHEN THEY ARE CLASSIFIED ACCORDING TO THE EDUCATION OF THEIR MOTHERS

GIRLS

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=18)				9 - 12 yrs. (N=35)				13 yrs. & Over (N=4)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	129	7.16	70	3.88	302	8.62	208	5.37	36	9.00	23	5.75
M_2	53	2.94	36	2.00	100	2.85	77	2.22	11	2.75	15	3.75
M_3	96	5.33	67	3.72	204	5.82	128	3.65	32	8.00	17	4.25
M_4	18	1.00	10	0.55	53	1.51	22	0.68	10	2.50	2	0.50
M_5	4	0.22	2	0.11	17	0.48	2	0.05	1	0.25	0	0.00

BOYS

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=18)				9 - 12 yrs. (N=24)				13 yrs. & Over (N=1) 17 yrs.			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	142	7.88	99	5.55	194	8.08	138	5.75	6	6.00	5	5.00
M_2	58	3.22	39	2.16	88	3.66	73	3.04	1	1.00	7	7.00
M_3	131	7.27	62	3.44	143	5.95	118	4.50	11	11.00	8	8.00
M_4	13	0.72	11	0.61	24	1.00	27	1.12	4	4.00	1	1.00
M_5	1	0.05	1	0.05	6	0.25	4	0.16	1	1.00	0	0.00

Table 48. FREQUENCY AND AVERAGE USE OF MOVABLES BY CAUCASIAN PUPILS OF GRADE 4 WHEN THEY ARE CLASSIFIED ACCORDING TO THE EDUCATION OF THEIR MOTHERS

Girls

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=11)				9 - 12 yrs. (N=23)				13 yrs. & Over (N=6)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	102	9.27	71	6.44	212	9.21	124	5.39	43	7.16	26	4.33
M_2	38	3.44	23	2.09	90	3.91	64	2.65	31	5.16	14	2.33
M_3	60	5.45	42	3.81	174	7.56	122	5.30	31	5.16	22	3.66
M_4	12	1.09	7	0.63	28	1.21	16	0.69	10	1.16	2	0.33
M_5	2	0.18	0	0.00	1	0.04	3	0.13	0	0.00	0	0.00

Boys

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=13)				9 - 12 yrs. (N=34)				13 yrs. & Over (N=13)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	120	9.23	72	5.53	295	8.67	155	4.56	114	8.76	43	3.30
M_2	68	5.23	37	2.84	160	4.70	76	2.23	46	3.53	33	2.53
M_3	83	6.38	43	3.30	264	7.76	145	4.26	99	7.61	58	4.46
M_4	11	0.85	2	0.15	43	1.26	18	0.52	17	1.30	10	0.76
M_5	4	0.30	1	0.07	8	0.23	2	0.06	3	0.22	0	0.00

Table 49. FREQUENCY AND AVERAGE USE OF MOVABLES BY CAUCASIAN PUPILS OF GRADE 6 WHEN THEY ARE CLASSIFIED ACCORDING TO THE EDUCATION OF THEIR MOTHERS

GIRLS

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=13)				9 - 12 yrs. (N=25)				13 yrs. & Over (N=15)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	142	10.92	77	5.92	238	9.52	149	5.96	112	7.46	86	5.73
M_2	63	4.84	48	3.69	94	3.76	71	2.84	77	5.13	52	3.46
M_3	107	8.23	75	5.76	214	8.56	188	7.52	131	8.73	111	7.40
M_4	10	0.76	15	1.15	32	1.28	39	1.56	25	1.66	15	1.00
M_5	1	0.07	2	0.15	6	0.24	3	0.12	8	0.53	1	0.06

BOYS

	Category 1				Category 2				Category 3			
	0 - 8 yrs. (N=20)				9 - 12 yrs. (N=17)				13 yrs. & Over (N=10)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	192	9.60	131	6.55	173	10.17	105	6.17	89	8.90	44	4.40
M_2	116	5.80	71	3.55	89	5.22	63	3.70	57	5.70	28	2.80
M_3	163	8.15	135	6.75	114	6.70	116	6.82	74	7.40	71	7.10
M_4	25	1.25	22	1.10	21	1.23	23	1.35	19	1.90	9	0.90
M_5	7	0.35	2	0.10	5	0.29	1	0.05	2	0.20	0	0.00

show an increase in use of all movables except the movable of manner over Negro girls whose mothers went no farther than the eighth grade in school. In their written language, girls whose mothers were in Category 2 increase their use of all movables but the movable of time and the indirect object expressed with a preposition.

In their oral language, Negro boys whose mothers attended high school increase all their movables except the movable of time over Negro boys whose mothers went only to the eighth grade or below; in their written language, boys whose mothers were in Category 2 increase the use of all their movables. It would appear that for Negro children to have mothers with superior education is an influence in the increase of their use of movables in language.

The best picture of influence of their mothers' education upon children's use of movables is shown in the language of Caucasian girls of Grade 4. In both oral and written language, the girls whose mothers were in Category 2 decreased their use of the movable of place (M_1) and increased their use of the movables of manner (M_2), time (M_3), and cause (M_4). Caucasian boys of Grade 4 differed from the girls of the same grade in decreasing their use of the movable of manner (M_2) when their mothers had gone to high school. Caucasian boys of Grade 4 whose mothers had attended college decreased their use of the movable of place over its use by both boys whose mothers had attended high school and those whose mothers had gone beyond the eighth grade. Though these boys with mothers who had attended college increased their use of the movable of manner over its use by boys whose mothers had attended high school, they did not use it as much as boys whose mothers had not gone beyond the eighth grade. They increased their use of both the movable of cause and condition over boys whose mothers were in the other two categories, but they used the indirect object expressed with a preposition least of any of the boys of their grade.

As was the case with Negro children of Grade 4, Caucasian children of Grade 4 seem to show that increased education of their mothers improves their use of movables.

Girls of Grade 6 use progressively more movables as the education of their mothers increases, but there seems to be no dependence between the education of the mothers of boys of Grade 6 and the use of movables by these boys.

Use of Movables and Father's Occupation

Because there were very few children in this study whose fathers were in Class I or Class II of the Minnesota Scale, and there were many children whose families were supported by Welfare agencies, in order to study use of movables by father's education or Welfare support the children were grouped into three categories: Category 1 to include those whose fathers' occupation fell into Classes I-IV on the Minnesota Scale. Category 2 to include those whose fathers' occupations fell into Classes V-VII on the Minnesota Scale, and Category 3 to include those whose families were supported by Welfare agencies.

Even with this division, only 6 families of Negro girls fall in Category 1, and only 5 families of Negro boys. Negro girls of families in Category 2 use more movables of every type in their oral language than Negro girls whose families are supported by Welfare. In their written language, they use more of every movable except the movable of place. Just the opposite is the case of Negro boys who use more movables of every type in both their written and oral language when their families are supported by Welfare agencies than when their fathers' occupations are in Category 2.

Table 50. FREQUENCY AND AVERAGE USE OF MOVABLES BY PUPILS OF NEGRO GRADE 4 WHEN CLASSIFIED BY THE OCCUPATIONS OF THEIR FATHERS AND WELFARE SUPPORT

GIRLS

	Category 1				Category 2				Category 3			
	I - IV (N=6)				V - VII (N=37)				Welfare (N=18)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	60	10.00	26	4.50	299	8.10	198	5.08	135	7.50	100	5.55
M_2	10	1.66	23	3.83	138	3.72	78	2.10	43	2.38	34	1.88
M_3	35	5.83	29	4.83	222	6.00	141	3.81	84	4.16	49	2.72
M_4	7	1.16	6	1.00	62	1.67	28	0.75	18	1.00	4	0.22
M_5	2	0.33	1	0.16	19	0.50	3	0.08	7	0.38	0	0.00

BOYS

	Category 1				Category 2				Category 3			
	I - IV (N=5)				V - VII (N=24)				Welfare (N-15)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	37	7.40	18	3.60	173	7.20	118	4.90	119	7.93	105	7.00
M_2	18	3.60	25	5.00	99	4.12	56	2.33	44	2.93	37	2.46
M_3	54	10.80	28	5.60	145	6.04	87	3.63	100	6.66	90	6.00
M_4	9	1.80	11	2.20	16	0.66	15	0.63	14	0.93	18	1.20
M_5	4	0.80	1	0.20	2	0.08	5	0.20	5	0.33	2	0.13

Table 51. FREQUENCY AND AVERAGE USE OF MOVABLES BY PUPILS OF CAUCASIAN GRADE 4 WHEN CLASSIFIED BY THE OCCUPATIONS OF THEIR FATHERS AND WELFARE SUPPORT

GIRLS

	Category 1				Category 2				Category 3			
	I - IV (N=20)				V - VII (N=13)				Welfare (N=3)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	156	7.80	103	5.15	132	10.15	76	5.85	24	8.00	12	4.00
M_2	90	4.50	47	2.35	54	4.15	40	3.07	6	2.00	3	1.00
M_3	122	6.10	97	4.85	91	7.00	62	4.76	18	6.00	7	2.33
M_4	27	1.35	10	0.50	20	1.53	11	0.84	1	0.33	0	0.00
M_5	1	0.05	2	0.10	2	0.15	0	0.00	0	0.00	0	0.00

BOYS

	Category 1				Category 2				Category 3			
	I - IV (N=27)				V - VII (N=21)				Welfare (N=6)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	241	8.92	140	5.18	186	8.85	100	4.76	65	10.83	19	3.16
M_2	115	4.25	65	2.40	111	5.27	57	2.71	19	3.16	9	1.50
M_3	201	7.44	126	4.66	145	6.90	76	3.61	30	5.00	19	3.16
M_4	39	1.48	17	0.63	21	1.00	6	0.28	6	1.00	1	0.16
M_5	10	0.37	1	0.03	4	0.19	2	0.09	2	0.36	0	0.00

Table 52. FREQUENCY AND AVERAGE USE OF MOVABLES WHEN CAUCASIAN PUPILS OF GRADE 6 ARE CLASSIFIED BY THEIR FATHERS' OCCUPATIONS AND WELFARE SUPPORT

GIRLS

	Category 1				Category 2				Category 3			
	I - IV (N=29)				V - VII (N=15)				Welfare (N=10)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	230	7.93	163	5.62	131	8.73	82	5.46	115	11.50	42	4.20
M_2	138	4.75	90	3.10	70	4.66	56	3.73	30	3.00	30	3.00
M_3	243	8.37	218	7.51	125	8.33	88	5.86	84	8.40	68	6.80
M_4	50	1.72	31	1.06	12	0.80	17	1.13	3	0.30	25	2.50
M_5	10	0.34	4	0.13	4	0.26	1	0.06	3	0.30	1	0.10

BOYS

	Category 1				Category 2				Category 3			
	I - IV (N=24)				V - VII (N=12)				Welfare (N=5)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	228	9.50	121	5.04	139	11.58	88	7.33	30	6.00	23	4.60
M_2	132	5.50	76	3.16	70	5.83	44	3.65	28	5.60	17	3.40
M_3	163	6.79	161	6.70	87	7.25	83	6.91	43	8.60	37	7.40
M_4	37	1.54	21	0.87	13	1.08	16	1.33	6	1.20	6	1.20
M_5	5	0.20	2	0.08	7	0.58	1	0.08	1	0.20	0	0.00

For girls of Caucasian Grade 4, the number of families supported by Welfare is too small to be of much significance. Girls whose families are supported by Welfare do, however, use fewer movables of all types than girls from the other two categories. Girls from families in Category 2 (father's occupation falling in V-VII on the Minnesota Scale) use more movables than girls from families in Category 1 except for M_2 in their oral language, and M_3 in their written language. Caucasian boys of Grade 4 in Category 2 show an increase in their use of movables of every type in their written language over boys whose families are supported by Welfare, but show a decrease of use of M_1 and M_5 in their oral language. Caucasian boys of Grade 4 whose fathers' occupations are in Category 1 show a confused picture of increase and decrease of the use of movables over the two lower categories.

At the level of Grade 6, no clear pattern of increase or decrease of use of movables by either boys or girls from those whose families are supported by Welfare to those whose fathers' occupations are in Category 1 is evident. In general, it seems safe to say that occupation of the father does not appear to play a clear-cut part in the use of movables by the children of this study, but where the father has no occupation or is nonexistent and the family is supported by Welfare, there usually is a noticeable decrease in use of movables.

Movables and Verbal Intelligence

To see whether there was any dependence between children's use of movables and their scores on a verbal intelligence test the average use of the movables M_1, M_2, M_3, and M_4 was computed for high and low quartiles when the children were classified by their scores on a test of verbal intelligence.

As shown in Table 53, the low quartile of Negro boys, in its oral language, uses more of all movables than the high quartile does except the movable M_4 (cause or condition). Though it does not use many more M_2's and M_1's, the difference in use of M_3 (time) is fairly large. In its written language, the high quartile of Negro boys uses a greater number of all movables than the low quartile does, but the superiority is not great because the written language samples for the high quartile average a fourth of a page longer per person (about 60 words) than the samples for the low quartile.

While the high quartile of Negro girls of Grade 4 shows pronounced superiority to the low quartile in the use of all movables except the movable of place (M_1) in oral language, in written language the high quartile uses fewer of all movables except the movable of time (M_3), in spite of the fact that the low quartile writes about 30 words per person less than the high quartile does. In both oral and written language, the superiority of Negro girls of the high quartile in use of the movable of time is marked.

In their oral language Caucasian boys of Grade 4 of the high quartile exceed those of the low quartile only in the use of the movable of time and the movable of cause and condition, but in their written language they exceed the low quartile in the use of all movables. Part of their superiority is probably due to the longer written samples of the high quartile, but the number of times the high quartile uses the movable of time in written language is so much greater than the number of times the low quartile uses it that length of written sample cannot entirely account for it.

The high quartile of Caucasian girls of Grade 4 uses more movables of all kinds than the low quartile does in its oral language, the difference in the use of the movable of time being the greatest of all. In its written

Table 53. FREQUENCY AND AVERAGE USE OF SELECTED MOVABLES WHEN BOYS OF GRADES 4 AND 6 ARE CLASSIFIED BY VERBAL INTELLIGENCE

HIGH QUARTILE

	Negro 4 (N=11)				Caucasian 4 (N=15)				Caucasian 6 (N=12)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	90	8.18	54	4.90	127	8.46	69	4.60	111	9.25	68	5.66
M_2	43	3.90	27	2.45	62	4.13	37	2.46	69	5.75	35	2.91
M_3	68	6.18	47	4.27	124	8.26	72	4.80	92	7.66	86	7.16
M_4	11	1.00	8	0.72	28	1.86	12	0.80	15	1.25	14	1.16

LOW QUARTILE

	Negro 4 (N=11)				Caucasian 4 (N=15)				Caucasian 6 (N=11)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	93	8.45	47	4.27	166	11.00	58	3.86	110	9.16	64	5.33
M_2	47	4.27	19	1.72	72	4.80	28	1.86	63	5.25	32	2.66
M_3	78	7.09	41	3.72	99	6.60	42	2.80	77	6.41	60	5.00
M_4	7	0.63	4	0.36	17	1.13	3	0.20	11	0.91	10	0.83

Table 54. FREQUENCY AND AVERAGE USE OF SELECTED MOVABLES WHEN GIRLS OF GRADES 4 AND 6 ARE CLASSIFIED BY VERBAL INTELLIGENCE

HIGH QUARTILE

	Negro 4 (N=14)				Caucasian 4 (N=10)				Caucasian 6 (N=13)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	108	7.42	63	4.50	97	9.70	43	4.30	117	9.00	63	4.84
M_2	51	3.64	40	2.85	49	4.90	19	1.90	78	6.00	43	3.30
M_3	115	8.21	71	5.06	81	8.10	42	4.20	100	7.69	84	6.46
M_4	23	1.64	5	0.35	21	2.10	4	0.40	16	1.23	13	1.00

LOW QUARTILE

	Negro 4 (N=14)				Caucasian 4 (N=10)				Caucasian 6 (N=13)			
	Oral		Written		Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
M_1	108	7.42	76	5.42	87	8.70	63	6.30	118	9.07	68	5.23
M_2	33	2.35	42	3.00	39	3.90	22	2.20	47	3.61	30	2.30
M_3	64	4.56	54	3.85	45	4.50	24	2.40	107	8.23	73	5.61
M_4	15	1.07	13	0.92	11	1.10	0	0.00	10	0.76	22	1.69

language, the low quartile of Caucasian girls of Grade 4 uses more movables of place and manner than the high quartile does, but the high quartile uses more movables of time and of cause and condition. For Caucasion girls of Grade 4 both the oral and the written language samples of the high quartile are about a fourth of a page longer than the samples of the low quartile.

Caucasian boys of Grade 6 in the high quartile use more movables of every type in both their written and their oral language than boys of the low quartile do. Caucasian girls of Grade 6 in the low quartile use more movables of place and of time in their oral language, and movables of place and of cause and condition in their written language than girls of the high quartile do. Though the oral language samples of Caucasian girls of Grade 6 in the high quartile are a little longer than the oral language samples of the low quartile, the written samples for the two quartiles are about the same length.

When boys of the three grades in this study are compared, it is shown that though Negro boys of the high quartile of Grade 4 use fewer movables of all types in their oral language than Caucasian boys of Grade 4 of the high quartile do, in their written language, Negro boys of this quartile are about equal to or are superior to Caucasian boys of Grade 4 in their use of movables. In their oral language, Caucasian boys of Grade 6 in the high quartile use more of all movables than boys of Caucasian Grade 4 do, except the movable of time; and in their written language they use more movables of every type. They are most noticeably superior in their use of the movable of time.

Negro boys of the low quartile use all movables except the movable of time less in their oral language than Caucasian boys of Grade 4 of the low quartile do. In their written language, though the language samples of the two groups are of the same length, Negro boys use more movables of every kind than Caucasian boys of Grade 4 in the low quartile do, except the movable of manner. In their oral language, Caucasian boys of Grade 6 in the low quartile are inferior in their use of the movables of place, of time, and of cause and condition to Caucasian boys of Grade 4 in the low quartile; but in their written language, they use more movables of all types.

When the three groups of girls are compared, Negro girls of both the high and low quartiles are shown as using fewer movables of place, manner, and of cause and condition in their oral language than Caucasian girls of Grade 4. The low quartile of Negro girls uses slightly more movables of time. In written language, Negro girls of the high quartile use about the same number of movables of all kinds as Caucasian girls of Grade 4 in the high quartile; but Negro girls of the low quartile use more movables of place, of time, and of cause and condition than Caucasian girls of Grade 4 in the low quartile do, and only slightly fewer movables of manner.

The high and low quartiles of Caucasian girls of Grade 6 use more movables of all types except the movable of time in both their oral and written language than girls of Grade 4 do. They use fewer movables of time in their oral language and considerably more in their written language than girls of Grade 4 do.

SUMMARY

1. In oral language, children of Grade 6 use more movables than children of Grade 4, and Caucasian children of Grade 4 use more than Negro children of Grade 4.

2. In written language, children of Grade 6 use a much larger percent of movables of manner, cause, and time than children of Grade 4 do, but they use a smaller percent of movables of place.

3. In written language, there is not much difference between the average use of movables by Caucasian children of Grade 4 and Negro children of Grade 4 except that Negro children use slightly

more movables of place (M_1) and Caucasian children slightly more movables of time (M_3).

4. In both written and oral language, boys, in general, use more movables than girls of the same grade, though the language samples of girls are slightly longer.

5. There seems to be some dependence between mother's education and the use of movables by children of Grade 4, and by girls of Grade 6, but no evidence of such dependence is apparent in the use of movables by boys of Grade 6.

6. In general, children of this study whose fathers' occupations fall between V-VII on the Minnesota Scale use movables as well as children whose fathers' occupations are classified higher. Most children whose families are supported by Welfare use fewer movables in both their written and oral language than other children, but Negro boys whose families are supported by Welfare use more movables than Negro boys whose fathers' occupations fall between V-VII on the Minnesota Scale.

7. When children are classified by their scores on a test of verbal intelligence, the high quartile is usually superior to the low in use of movables in written language, but the low quartile may do as well or better in using movables in oral language. Except for Caucasian girls of Grade 6, the high quartile shows pronounced superiority in the use of the movable of time in written language of a narrative type.

8. Negro children of Grade 4 who are high in verbal intelligence use movables as well or better than Caucasian children of Grade 4 in their written language.

CHAPTER VI

Findings: Elaboration of the Basic Sentence Elements---Level II

THE VERB

Expansion of the Verb

Level II of the system of analysis of language used in this research gives some idea of the elaboration of the basic elements of the sentence. For instance, the verb of the English sentence may be a single verb as in the expression "They come" or it may be a verb phrase in which auxiliaries such as have, may, should, can, do, will, am, etc. contribute to a more exact expression of the time of an action than a single verb does. It may also be a compound verb. The symbol v(sg) is used in this study to designate both the verb phrase and the compound verb, i.e., "He didn't go" or "She laughed and cried at the same time."

Table 55 shows the average frequency of the verb phrase and the

Table 55. *AVERAGE FREQUENCIES OF V(SG) FOR ALL QUARTILES*

Oral Language

	Grade 4		Grade 4		Grade 6	
Quartile	Negro Boys	Negro Girls	Caucasian Boys	Caucasian Girls	Caucasian Boys	Caucasian Girls
First	4.3	3.6	2.5	4.3	5.6	5.3
Second	8.0	6.1	8.8	7.8	9.8	9.0
Third	11.8	9.8	11.6	10.6	12.4	11.4
Fourth	16.4	15.0	15.9	13.8	16.8	17.0

Written Language

First	1.1	2.6	1.0	2.2	1.4	2.4
Second	3.8	6.2	3.2	4.7	4.5	4.2
Third	6.3	7.4	5.7	7.2	6.1	5.1
Fourth	12.4	13.3	12.5	10.5	10.0	10.5

compound verb in both the oral and the written language of the children of this study. As shown in this table, in oral language, the most notable feature of verb usage is the strong sex difference at the level of Grade 4. In the three highest quartiles, both Negro and Caucasian boys of Grade 4 use more elaborated verb forms than the girls of this grade do. Negro boys of Grade 4 use more elaborated verb forms than Negro girls do in every quartile. The difference in average use of these forms by the two sexes is as high as two per person for Caucasians of Grade 4 in the highest quartile, and for Negroes of Grade 4 in the second and third quartiles. In the highest quartile, boys of Grade 6 use about the same number of verb phrases and compound verbs as girls do, but they surpass the girls in the use of these verb forms in the two middle quartiles.

How much more difficult writing is for boys of Grade 4 than it is for girls of the same grade is evident in the complete reversal of the relative use of the elaborated verb forms by boys and girls in their written language, except that Caucasian boys in the fourth quartile still do better than girls. By Grade 6, there is no clear-cut pattern of superiority of either boys or girls in the use of verb phrases and compound verbs in their written language. Whether this shows that boys have overcome their difficulties in transferring their oral language into written language or not is one of the many questions that the analysis of children's language on Level II raises.

When the pupils of Grades 4 and 6 are classified by their verbal intelligence, the same pattern of male superiority in the use of the elaborated verb in oral language is shown in both high and low quartiles. It is particularly marked in the low quartile, a characteristic which becomes more significant when it is remembered that boys had lower scores on the

California test of mental maturity in verbal intelligence than girls had.

In their written language, both Negro boys of Grade 4 and Caucasian boys in the high quartile of Grade 6 are superior to the girls of the high quartile in those grades in the use of elaborated verbs, but Caucasian boys and girls of Grade 4 of the high quartile use about the same number of verb phrases and compound verbs. In the lower quartile, boys fall far behind girls in the use of these forms in all grades.

Table 56. TOTAL AND AVERAGE FREQUENCY OF USE OF V(SG) FOR PUPILS WHEN CLASSIFIED ACCORDING TO THEIR VERBAL INTELLIGENCE

	Grade 4				Grade 4				Grade 6			
Quartile	Negro Boys		Negro Girls		Caucasian Boys		Caucasian Girls		Caucasian Boys		Caucasian Girls	
	f	Av.	F	Av.	f	Av.	f	Av.	f	Av.	f	Av.
Oral Language												
High	110	10.00	137	9.78	154	10.26	95	9.50	148	12.33	131	10.07
Low	108	9.81	113	8.07	177	11.80	96	9.60	113	10.27	128	9.84
Written Language												
High	83	7.54	88	6.28	100	6.66	66	6.60	82	7.45	73	5.61
Low	48	4.36	139	9.92	55	3.66	59	5.90	44	4.40	68	5.23

Both Table 55 and Table 56 show that there has been no development in the use of verb phrase and compound verb worthy of comment between Grade 4 and Grade 6. They also show that Negro children use these forms as well as Caucasian children do. In fact, in average frequencies in written language, the use of elaborated verbs by Negro boys of the high quartile is superior to that of both pupils of Caucasian Grade 4 and Caucasian Grade 6, but not much superior to that of boys of Grade 6. Though deviations from what is considered standard form of verbs in English is the commonest deviation in use of language of children of both grades in this study, ability to use elaborated verb structures of all kinds is already a characteristic of children's language by Grade 4, and there is not much development of use of verbs between Grade 4 and Grade 6.

Clauses and Phrases Used as Movables

Only rarely did a child in this study write without using movables; none spoke without using them. However, many of their movables were single words. They generally organized narrations by using the word *then* repeatedly and they used other single words to express the concept of time. In order to indicate the place of an action, single words such as *there* were often used. Level II of this analysis shows among other things how often children use phrases and clauses instead of single words to express relationships associated with the verb. Table 57 is a tabulation of the average frequency of use of phrases in all four quartiles.

In both oral and written language, the phrase to express the place of an action (sgv_1) is used in all quartiles of all grades, the only type of phrase to be so widely used. The phrase expressing manner (sgv_2) is used by all quartiles of all grades in their oral language, but it is not used at all by one quartile of both Negro boys and Negro girls in their written language. Though the phrase showing the time of an action (sgv_3) is used through all quartiles of Grade 6 in both their oral and written language, it is not used by one quartile of all pupils, Negro or Caucasian, of Grade 4; and it is not used by two quartiles of Negro boys in their oral language. The phrase expressing cause or condition is not used by half the children of all grades, and the phrase made when the indirect object is expressed with a preposition is not used by three-fourths of the children of all grades.

Table 57. AVERAGE FREQUENCY OF USE OF PHRASES ASSOCIATED WITH THE VERB BY PUPILS OF NEGRO GRADE 4, CAUCASIAN GRADE 4, AND CAUCASIAN GRADE 6 - ALL QUARTILES

Type of Phrase	Sex and Grade	Oral				Written			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
sgv_1	Negro Boys, Grade 4	2.3	6.9	8.4	11.4	1.4	3.6	5.6	9.6
	Negro Girls, Grade 4	3.6	5.8	7.9	11.9	1.1	2.7	5.2	8.7
	Caucasian Boys, Grade 4	3.4	6.9	9.1	13.1	1.3	3.3	4.9	8.3
	Caucasian Girls, Grade 4	4.5	7.5	9.3	11.4	1.6	3.4	5.3	9.9
	Caucasian Boys, Grade 6	5.2	7.7	9.4	12.7	1.4	3.4	5.9	9.8
	Caucasian Girls, Grade 6	3.4	5.9	8.4	12.8	1.8	4.3	5.5	8.5
sgv_2	Negro Boys, Grade 4	0.4	1.6	2.8	4.4	0.0	0.9	1.6	3.8
	Negro Girls, Grade 4	0.4	1.4	2.3	4.4	0.0	0.4	1.2	2.8
	Caucasian Boys, Grade 4	0.9	2.2	3.2	5.7	0.3	1.0	1.9	3.4
	Caucasian Girls, Grade 4	0.6	2.0	2.7	5.3	0.1	1.0	1.6	3.5
	Caucasian Boys, Grade 6	1.2	2.9	4.7	6.5	0.1	1.5	2.5	4.0
	Caucasian Girls, Grade 6	1.6	2.2	3.1	5.1	0.2	1.0	2.4	4.4
sgv_3	Negro Boys, Grade 4	0.0	0.0	1.0	3.5	0.0	0.6	1.4	4.0
	Negro Girls, Grade 4	0.0	1.0	1.0	2.3	0.0	0.4	1.6	4.0
	Caucasian Boys, Grade 4	0.0	0.9	1.5	3.4	0.0	1.1	2.0	4.0
	Caucasian Girls, Grade 4	0.0	0.9	1.6	3.3	0.0	0.8	1.8	4.2
	Caucasian Boys, Grade 6	0.3	1.0	1.9	3.9	0.2	1.1	2.1	4.8
	Caucasian Girls, Grade 6	0.6	1.5	2.5	4.6	0.7	1.6	2.4	5.3
sgv_4	Negro Boys, Grade 4	0.0	0.0	0.4	1.6	0.0	0.0	0.2	2.4
	Negro Girls, Grade 4	0.0	0.0	1.0	2.9	0.0	0.0	0.1	1.5
	Caucasian Boys, Grade 4	0.0	0.0	0.6	2.4	0.0	0.0	0.1	1.2
	Caucasian Girls, Grade 4	0.0	0.0	0.3	1.4	0.0	0.0	0.1	1.7
	Caucasian Boys, Grade 6	0.0	0.0	0.8	1.8	0.0	0.0	0.9	2.0
	Caucasian Girls, Grade 6	0.0	0.0	0.8	2.1	0.0	0.0	0.6	2.7
sgv_5	Negro Boys, Grade 4	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6
	Negro Girls, Grade 4	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.3
	Caucasian Boys, Grade 4	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.2
	Caucasian Girls, Grade 4	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
	Caucasian Boys, Grade 6	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.3
	Caucasian Girls, Grade 6	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.6

In general, children of Grade 6 are superior to those of Grade 4 only in the use of the phrase of manner and the phrase of time. Negro children are slightly inferior to Caucasian children of Grade 4 in their use of all phrases in written language except the phrase indicating place.

Clauses are used much less than phrases. A look at Table 58 shows two significant things about use of clauses by the children of this study. The first of these is that while most verbal concepts are expressed more by phrases, clauses are preferred to phrases for expressing time even at the level of Grade 4. The other is that some maturity seems to be shown in increased use of clauses. Children of Grade 6 generally use more clauses than children of Grade 4 do. The difference between the two grades is most marked in the written language and in the use of clauses expressing manner, time, and cause or condition.

When children are classified by their scores on a test of verbal intelligence and their use of phrases and clauses associated with the verb is computed, some differences in use of language between the high and low quartiles is evident.

Table 59 is a tabulation of the frequency and average use of clauses and phrases by the high and low quartiles of girls, and Table 60 shows the same data about clauses and phrases for boys. For Negro girls, the chief difference between the low and high quartile in the use of clauses is that the high quartile uses a significantly greater number of clauses of time in both oral and written language than the low quartile does. The high quartile also shows a slight superiority to the low in the use of all other clauses except that the low quartile uses about the same number of clauses of manner in its oral language. In its use of phrases, the low quartile

Table 58. AVERAGE FREQUENCY OF USE OF CLAUSES ASSOCIATED WITH THE VERB BY PUPILS OF NEGRO GRADE 4, CAUCASIAN GRADE 4, AND CAUCASIAN GRADE 6 - ALL QUARTILES

Type of Clause	Sex and Grade	Oral				Written			
		Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
sgv_1	Negro Boys, Grade 4	0.0	0.0	0.1	1.2	0.0	0.0	0.0	0.6
	Negro Girls, Grade 4	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.7
	Caucasian Boys, Grade 4	0.0	0.0	0.2	1.3	0.0	0.0	0.0	0.4
	Caucasian Girls, Grade 4	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.7
	Caucasian Boys, Grade 6	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.2
	Caucasian Girls, Grade 6	0.0	0.0	0.2	1.8	0.0	0.0	0.0	0.8
sgv_2	Negro Boys, Grade 4	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.4
	Negro Girls, Grade 4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
	Caucasian Boys, Grade 4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
	Caucasian Girls, Grade 4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Caucasian Boys, Grade 6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.3
	Caucasian Girls, Grade 6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.6
sgv_3	Negro Boys, Grade 4	0.1	1.3	2.3	5.4	0.0	0.6	1.1	4.4
	Negro Girls, Grade 4	0.0	0.6	1.5	4.1	0.0	0.3	1.5	4.1
	Caucasian Boys, Grade 4	0.1	1.3	2.6	4.3	0.0	0.7	1.9	3.7
	Caucasian Girls, Grade 4	0.3	1.4	2.4	5.2	0.0	0.9	2.0	5.1
	Caucasian Boys, Grade 6	0.2	1.6	2.9	5.2	0.6	1.7	3.2	6.5
	Caucasian Girls, Grade 6	0.6	1.5	2.6	4.5	0.4	1.6	3.3	5.5
sgv_4	Negro Boys, Grade 4	0.0	0.0	0.4	1.4	0.0	0.0	0.0	1.2
	Negro Girls, Grade 4	0.0	0.0	0.5	2.4	0.0	0.0	0.0	1.2
	Caucasian Boys, Grade 4	0.0	0.0	0.5	1.6	0.0	0.0	0.0	0.8
	Caucasian Girls, Grade 4	0.0	0.0	0.5	3.0	0.0	0.0	0.0	1.0
	Caucasian Boys, Grade 6	0.0	0.0	1.0	2.6	0.0	0.0	0.4	1.5
	Caucasian Girls, Grade 6	0.0	0.0	0.7	2.0	0.0	0.0	0.3	2.0
sgv_5	Negro Boys, Grade 4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Negro Girls, Grade 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Caucasian Boys, Grade 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Caucasian Girls, Grade 4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Caucasian Boys, Grade 6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Caucasian Girls, Grade 6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

does as well as the high quartile, actually using more phrases of all types in written language than the high quartile does.

The high quartile of Caucasian girls of Grade 4 uses a much greater number of clauses expressing time in its oral language than the low quartile does, and a few more clauses of time in written language. The low quartile uses more clauses of place in written language than the high quartile does. In both oral and written language, the high quartile uses a significantly greater number of phrases of all kinds than the low quartile does. There is greater difference between the use of phrases and clauses by high and low quartiles of Caucasian girls of Grade 4 than there is between high and low quartiles of Negro girls of Grade 4.

In their oral language, the high and low quartiles of Caucasian girls of Grade 6 use about the same number of clauses to express manner, time, and cause or condition. In written language, the low quartile uses more clauses of place, the high quartile more clauses of time. The high quartile uses more phrases of every kind in oral language than the low quartile does, but in written language, the low quartile exceeds the high slightly in phrases which express place, time, and cause or condition. The high quartile uses significantly more phrases to express manner.

Generally speaking, girls who made high scores on a test of verbal intelligence use more phrases in oral language than girls who made low scores, and use more clauses in both oral and written language.

Negro boys of the high quartile use more clauses of cause or condition, and Negro boys of the low quartile use more clauses of place, though the difference in use is not marked in either case. Neither quartile uses clauses of manner, and the two quartiles use an equal number of clauses

Table 59. FREQUENCY AND AVERAGE USE OF CLAUSES AND PHRASES ASSOCIATED WITH THE VERB BY GIRLS OF GRADES 4 AND 6 WHEN CLASSIFIED BY VERBAL INTELLIGENCE

HIGH QUARTILE

	Grade 4				Grade 4				Grade 6			
	Negro Girls (N=14)				Caucasian Girls (N=10)				Caucasian Girls (N=13)			
	Oral		Written		Oral		Written		Oral		Written	
Clauses	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
ssv_1	7	0.50	3	0.21	3	0.30	0	0.00	4	0.30	1	0.07
ssv_2	1	0.07	1	0.07	1	0.10	0	0.00	6	0.46	2	0.15
ssv_3	31	2.28	31	2.28	23	2.30	14	1.40	30	2.30	36	2.67
ssv_4	13	0.92	3	0.21	7	0.70	5	0.50	10	0.76	3	0.23
Phrases												
sgv_1	94	6.71	44	3.14	84	8.40	40	4.00	104	8.00	58	4.46
sgv_2	30	2.14	17	1.21	37	3.70	8	0.80	47	3.61	34	2.61
sgv_3	20	1.42	24	1.71	22	2.20	21	2.10	27	2.07	27	2.07
sgv_4	10	0.71	3	0.21	12	1.20	1	0.10	10	0.76	10	0.76

LOW QUARTILE

	Grade 4				Grade 4				Grade 6			
	Negro Girls (N=14)				Caucasian Girls (N=10)				Caucasian Girls (N=13)			
	Oral		Written		Oral		Written		Oral		Written	
Clauses	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
ssv_1	3	0.21	1	0.07	2	0.20	3	0.30	6	0.46	3	0.23
ssv_2	1	0.07	0	0.00	0	0.00	0	0.00	0	0.00	2	0.15
ssv_3	16	1.14	15	1.07	18	1.80	9	0.90	27	2.07	28	2.15
ssv_4	8	0.57	5	0.35	9	0.90	0	0.00	6	0.46	5	0.38
Phrases												
sgv_1	100	7.14	63	4.50	78	7.80	58	5.80	95	7.30	60	4.61
sgv_2	24	1.71	25	1.78	27	2.70	14	1.40	38	2.96	13	1.00
sgv_3	14	1.00	36	2.85	12	1.20	5	0.50	21	1.61	31	2.39
sgv_4	8	0.57	9	0.65	4	0.40	0	0.00	6	0.46	15	1.15

Table 60. FREQUENCY AND AVERAGE USE OF CLAUSES AND PHRASES ASSOCIATED WITH THE VERB BY BOYS OF GRADES 4 AND 6 WHEN CLASSIFIED BY VERBAL INTELLIGENCE

HIGH QUARTILE

	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)				Caucasian Boys (N=15)				Caucasian Boys (N=12)			
	Oral		Written		Oral		Written		Oral		Written	
Clauses	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
ssv$_1$	3	0.27	2	0.18	3	0.20	1	0.06	3	0.25	3	0.25
ssv$_2$	0	0.00	0	0.00	0	0.00	0	0.00	1	0.08	1	0.08
ssv$_3$	27	2.45	13	1.18	27	1.80	40	2.66	23	1.91	36	3.00
ssv$_4$	7	0.63	5	0.45	9	0.60	5	0.33	8	0.66	6	0.50
Phrases												
sgv$_1$	80	7.18	54	4.91	116	7.73	67	4.46	108	9.00	59	4.91
sgv$_2$	29	2.63	13	1.18	52	3.46	24	1.60	43	3.58	18	1.50
sgv$_3$	14	1.27	22	2.00	20	1.33	34	2.26	25	2.08	23	1.91
sgv$_4$	7	0.63	5	0.45	21	1.40	8	0.53	5	0.41	9	0.75

LOW QUARTILE

	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)				Caucasian Boys (N=15)				Caucasian Boys (N=11)			
	Oral		Written		Oral		Written		Oral		Written	
Clauses	f.	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
ssv$_1$	6	0.54	0	0.00	7	0.46	1	0.06	1	0.09	3	0.27
ssv$_2$	0	0.00	1	0.09	2	0.13	0	0.00	1	0.09	1	0.09
ssv$_3$	27	2.45	13	1.18	36	2.40	6	0.40	23	2.09	28	2.55
ssv$_4$	4	0.36	0	0.00	10	0.66	2	0.13	8	0.72	4	0.36
Phrases												
sgv$_1$	79	7.18	45	4.09	152	10.13	55	3.66	97	8.88	55	5.00
sgv$_2$	27	2.45	11	1.00	40	2.66	15	1.00	45	4.09	18	1.63
sgv$_3$	21	1.90	8	0.72	24	1.60	21	1.40	15	1.36	19	1.72
sgv$_4$	3	0.27	4	0.36	8	0.53	1	0.06	5	0.45	6	0.55

which express time. In their use of phrases, the two quartiles are very little different.

In oral language, the low quartile of Caucasian boys of Grade 4 uses more clauses of every kind than the high quartile does. The difference is especially marked in the average use of the clause of time. In written language, the high quartile uses more than six times as many clauses of time as the low quartile does, a use that cannot be entirely accounted for by the slightly longer written language samples of the high quartile. When the two quartiles are compared by their use of phrases in oral language, the low quartile uses many more phrases to express place, and a few more to express time, but the high quartile is significantly superior in the use of the phrases of manner and of cause or condition. In written language, the high quartile shows more frequent use of the phrase expressing time, but the low quartile uses more phrases of manner. In written language, the high quartile of Caucasian boys of Grade 4 uses more clauses of time and more phrases of time than it does in its oral language; while boys of the low quartile use more phrases and clauses of every kind in their oral language than they do in their written. As was the case with girls of Grade 4, there is more difference between the use of clauses and phrases associated with the verb by the high and low quartiles of Caucasian boys than by the high and low quartiles of Negro boys.

In oral language, Caucasian boys of Grade 6 of the low quartile use both clauses and phrases of every type about as well as those of the high quartile do, except that boys of the high quartile use slightly more phrases of time and boys of the low quartile slightly more phrases of manner. In written language, boys of the high quartile use slightly more clauses of time and slightly more phrases of all types, except phrases to show the place of an action, than boys of the low quartile do. Caucasian boys of Grade 6 of both the high and the low quartile show an increase in use of clauses of time in their written language over their use of it in their oral language, though there is usually a decrease of use of both clauses and phrases in the written language as compared with the oral.

THE SUBJECT AND THE COMPLEMENT

Level II of the system of analysis used in this study shows whether fillers of the noun slot when the noun is the subject, and fillers of the noun slot when the noun is a complement are clauses or phrases. As has been the case in all analysis on Level II, the analysis does not make fine distinctions. It does not distinguish between a phrase which is merely an adjective or a possessive pronoun plus a noun, and a phrase which is elaborate enough to contain within itself other phrases or even clauses. Also, all clauses are analyzed simply as clauses regardless of whether their structure is simple or highly complicated.

The table showing the total and average frequency of use of these clauses and phrases which amplify the subject or the complement (Table 61) is particularly interesting because it reveals little difference in the use of them between Grade 4 and Grade 6.

The use of both phrase and clause as elaboration of the complement is large, but there is more elaboration of the complement by phrase than by clause. In all grades the use of phrase in the complement slot is greater in oral language than in written. In average use of phrase in the complement slot, Caucasian girls of Grade 4 are lowest and Negro girls of Grade 4 are highest in both oral and written language. Negro children of Grade 4 use more phrases in the complement slot than any other children in the

Table 61. TOTAL AND AVERAGE FREQUENCY OF SELECTED VARIABLES* FOR THREE GRADES

Grade		(sg)	(sg)	(ss)	(ss)	ss	ss	sg	sg
		O	W	O	W	O	W	O	W
Negro Boys, Grade 4	Total Avg.	245 5.7	328 7.6	12 0.3	4 0.1	111 2.6	86 2.0	529 12.30	358 8.32
Negro Girls, Grade 4	Total Avg.	266 4.7	457 8.0	10 0.2	12 0.2	131 2.3	171 3.0	759 14.32	519 9.07
Caucasian Boys, Grade 4	Total Avg.	309 5.2	331 5.5	27 0.4	3 0.05	186 3.1	94 1.6	742 12.36	419 6.98
Caucasian Girls, Grade 4	Total Avg.	213 5.32	285 7.12	24 0.6	5 0.1	97 2.4	97 2.4	430 10.75	311 7.77
Caucasian Boys, Grade 6	Total Avg.	229 4.9	253 5.4	35 0.7	10 0.2	101 2.1	141 3.0	611 12.73	368 7.66
Caucasian Girls, Grade 6	Total Avg.	264 5.0	290 5.5	19 0.4	19 0.4	196 3.7	155 2.9	640 12.37	394 7.57

*The meaning of the symbols is as follows: (1) Those related to the subject--(sg), a phrase; (ss), a clause. (2) Those which are complements--sg, a phrase; ss, a clause.

study. Caucasian boys and girls of Grade 6 use the next largest number, and Caucasian boys and girls of Grade 4 use the least.

Only Negro girls of Grade 4 and Caucasian boys of Grade 6 use more clauses for elaboration of the complement in their written language than they do in their oral. There is not much difference between use of clauses by Caucasian girls of Grade 4 and Negro boys of Grade 4 in their oral and written language. Caucasian boys of Grade 4 and Caucasian girls of Grade 6 use many more clauses in the complement slot in their oral language than they do in their written.

The children of both Grade 4 and Grade 6 use more elaboration of the subject by phrase in their written language than they do in their oral language. This is particularly significant because their written language samples were shorter than their oral language samples, especially those of Grade 4. The increase in modification of the subject in their written language over that in their oral language is most noticeable in the writing of Negro children. The only Caucasian group which shows a similar, but not as great, increase in modification of the subject by phrase is Caucasian girls of Grade 4. Pupils of Grade 6, both boys and girls, and Caucasian boys of Grade 4 use only a few more phrases in the subject slot in their written language than they do in their oral.

None of the children of this study use clauses much to elaborate the subject. The total number of cases of use of clauses in the subject slot in their written language is so small that it is probable most of them come from the writing of a very few pupils of each group. Though no frequency distribution for this factor was run, other frequency distributions have shown that there is a tendency for individuals to repeat, sometimes excessively, structures once used. The averages in Table 61 show all pupils using more clauses in the subject slot in the oral language than in the written except Negro girls of Grade 4 and Caucasian girls of Grade 6 who use an equal amount in both language samples.

When the use of these variables related to the subject and the complement is studied by the verbal intelligence of pupils, the picture has some unexpected features. In the high quartile when children are classified by their verbal intelligence, Caucasian boys of Grade 4 use more elaboration of the subject by phrase in their oral language than Caucasian girls of Grade 4 do. Caucasian boys of Grade 6 use slightly more than Caucasian girls of Grade 6 do, but boys and girls of Grade 6 use fewer modifiers of the subject than boys and girls, both Negro and Caucasian, of Grade 4 do. When the written language of Negro boys of Grade 4 and that of Caucasian boys of Grade 6 are compared, the Negro boys of Grade 4 use far more elaboration of the subject by phrase than Caucasian boys of Grade 6. In fact, in the written language of the high quartile, Negro pupils, both boys and girls, of Grade 4 elaborate the subject much more than Caucasian pupils do.

In the high quartile in their oral language, Negro boys and Caucasian girls of Grade 4 use the phrase in the complement slot less than any other children. Caucasian boys of Grade 6 use phrases related to the complement most, but scarcely more than Negro girls of Grade 4. In the written language, the high quartile of Negro pupils, both boys and girls, uses more of these phrases related to the complement than any of the other pupils of the study, and Caucasian boys and girls of Grade 6 use fewer of them than children, either Negro or Caucasian, of Grade 4.

It is only in use of clauses related to the subject in their oral language that the high quartile of Grade 6 is generally superior to pupils

Table 62. TOTAL AND AVERAGE FREQUENCY OF SELECTED VARIABLES FOR THREE GRADES WHEN PUPILS ARE CLASSIFIED BY VERBAL INTELLIGENCE

HIGH QUARTILE - ORAL LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
(sg)	64	5.81	90	6.42	110	7.33	60	6.00	68	5.66	64	4.92
sg	127	11.55	189	13.50	192	12.85	114	11.40	168	14.00	167	12.82
(ss)	3	0.27	5	0.35	5	0.33	17	1.70	8	0.66	8	0.61
ss	31	2.81	39	2.78	37	2.46	22	2.20	25	2.08	56	4.30

HIGH QUARTILE - WRITTEN LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
(sg)	104	9.45	106	7.57	82	5.46	50	5.00	80	6.66	63	4.84
sg	102	9.27	133	9.50	121	8.06	84	8.40	78	6.50	78	6.00
(ss)	2	0.18	8	0.57	0	0.00	1	0.10	6	0.50	4	0.30
ss	24	2.18	73	5.21	28	1.86	46	4.60	37	3.08	39	3.00

*The meaning of the symbols is as follows: (sg), a phrase related to the subject; (ss), a clause related to the subject; sg, a phrase which is a complement; ss, a clause which is a complement.

Table 63. TOTAL AND AVERAGE FREQUENCY OF SELECTED VARIABLES FOR THREE GRADES WHEN PUPILS ARE CLASSIFIED BY VERBAL INTELLIGENCE

LOW QUARTILE - ORAL LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N-11)		Negro Girls (N=14)		Cacuasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=11)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
(sg)	59	5.36	59	4.21	72	4.80	43	4.30	48	4.36	73	5.61
sg	127	11.55	168	12.00	182	12.13	92	9.20	127	11.55	163	12.53
(ss)	1	0.09	1	0.07	8	0.53	3	0.30	3	0.27	7	0.53
ss	29	2.63	25	1.78	43	2.86	27	2.70	21	1.90	37	2.69

LOW QUARTILE - WRITTEN LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=11)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
(sg)	53	4.63	102	7.28	35	2.33	92	9.20	51	4.63	73	5.61
sg	59	5.36	160	11.42	80	5.33	28	2.80	76	6.90	124	9.53
(ss)	0	0.00	2	0.14	0	0.00	1	0.10	1	0.09	5	0.38
ss	31	2.81	38	2.71	9	0.60	7	0.70	32	2.90	39	3.00

*The meaning of the symbols is as follows: (sg), a phrase related to the subject; (ss), a clause related to the subject; sg, a phrase which is a complement; ss, a clause which is a complement.

of Grade 4, but Caucasian girls of Grade 4 use a great many more of these than children of Grade 6 do. However, as has been noted previously, neither pupils of Grade 4 nor those of Grade 6 use enough clauses related to the subject to make these figures dependable data for producing valid generalizations. In the use of clauses related to the complement in their written language, Negro and Caucasian girls of Grade 4 are superior to all other pupils.

There is more similarity in the use of these variables by the three grades in this study in the oral language of the low quartile that there is in the oral language of the high quartile. Negro boys of Grade 4 and Caucasian girls of Grade 6 of the low quartile use the phrase in the subject slot a little more than other pupils do in their oral language. In their written language, however, all girls greatly surpass the boys of the same grade in their use of phrases in the subject slot. The difference is particularly marked in Grade 4.

In oral language, the low quartile of Caucasian boys of Grade 4 and Caucasian girls of Grade 6 use more clauses in the subject slot, and boys of Grade 4, both Negro and Caucasian, use more clauses in the complement slot than other children do. What is most significant is the slight difference in the number of phrases or clauses in the subject or complement slot used by the high quartile as compared with the low. Only in the phrase related to the complement is there a consistent drop in use by the low quartile.

RELATION BETWEEN SELECTED VARIABLES AND PARAGRAPH COMPREHENSION

To see whether there was any relation between children's reading ability and their use of language structures, the children of this study were classified by their scores in paragraph comprehension on a silent

Table 64. AVERAGE FREQUENCY OF SELECTED VARIABLES WHEN PUPILS OF THREE GRADES ARE CLASSIFIED BY THEIR SCORES IN PARAGRAPH COMPREHENSION ON A SILENT READING TEST

HIGH QUARTILE - ORAL LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
sgv_2	31	2.81	35	2.50	43	2.86	30	3.00	43	3.58	35	2.69
sgv_3	14	1.27	17	1.21	17	1.13	17	1.70	22	1.83	29	2.23
ssv_3	28	2.54	19	1.35	43	2.86	23	2.30	36	3.00	24	1.84
ss	31	2.81	33	2.35	59	3.93	37	3.70	34	2.83	60	4.61
(ss)	5	0.45	6	0.43	8	0.53	12	1.20	6	0.50	7	0.54

HIGH QUARTILE - WRITTEN LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
sgv_2	17	1.54	14	1.00	26	1.73	9	0.90	23	1.91	31	2.38
sgv_3	25	2.27	20	1.43	38	2.53	18	1.80	19	1.58	28	2.15
ssv_3	16	1.45	27	1.93	39	2.60	12	1.20	26	2.16	34	2.61
ss	31	2.81	41	2.93	34	2.26	31	3.10	36	3.00	49	3.77
(ss)	3	0.27	6	0.43	2	0.13	1	0.10	3	0.25	6	0.46

*The meaning of the symbols is as follows: sgv_2, movable of manner which is a phrase; sgv_3, movable of time which is a phrase; ssv_3, movable of time which is a clause; ss, a clause related to the complement; (ss), a clause related to the subject.

Table 65. AVERAGE FREQUENCY OF SELECTED VARIABLES WHEN PUPILS OF THREE GRADES ARE CLASSIFIED BY THEIR SCORES IN PARAGRAPH COMPREHENSION ON A SILENT READING TEST

LOW QUARTILE - ORAL LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
sgv_2	23	2.09	28	2.00	41	2.73	24	2.40	57	4.75	38	2.92
sgv_3	19	1.72	7	0.50	29	1.93	17	1.70	20	1.66	37	2.84
ssv_3	18	1.63	19	1.35	30	2.00	13	1.30	26	2.16	31	2.38
ss	31	2.81	13	0.92	50	3.33	20	2.00	33	2.75	38	2.92
(ss)	2	0.18	1	0.07	7	0.46	3	0.30	8	0.66	4	0.30

LOW QUARTILE - WRITTEN LANGUAGE

Variable*	Grade 4				Grade 4				Grade 6			
	Negro Boys (N=11)		Negro Girls (N=14)		Caucasian Boys (N=15)		Caucasian Girls (N=10)		Caucasian Boys (N=12)		Caucasian Girls (N=13)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
sgv_2	10	0.90	14	1.00	18	1.20	10	1.00	22	1.83	14	1.07
sgv_3	11	1.00	8	0.57	21	1.40	11	1.10	22	1.83	34	2.61
ssv_3	15	1.36	15	1.07	7	0.46	18	1.80	32	2.66	24	1.84
ss	15	1.36	17	1.21	9	0.60	4	0.40	24	2.00	27	2.07
(ss)	1	0.09	0	0.00	0	0.00	0	0.00	2	0.25	3	0.23

*The meaning of the symbols is as follows: sgv_2, movable of manner which is a phrase; sgv_3, movable of time which is a phrase; ssv_3, movable of time which is a clause; ss, a clause related to the complement; (ss), a clause related to the subject.

reading test. Tables 64 and 65 show the use of selected variables by low and high quartiles. The selection of variables was made on the following basis: sgv_2, a phrase which is a movable of manner, chosen because some research in children's language has implied that increased use of the movable of manner shows maturity in use of language; sgv_3, a phrase which is a movable of time, and ssv_3, a clause which is a movable of time, both chosen because this study has shown the movable of time to be significant in narration; ss, a clause related to the complement, and (ss), a clause related to the subject, both chosen because in this study use of clauses seems to imply more maturity than use of phrases.

The tabulation of use of these variables by the two quartiles shows that children of Grade 4 who make high scores on paragraph comprehension generally use more clauses and phrases associated with the verb, and clauses associated with the subject and the complement than children who make low scores. Children of Grade 6 who make high scores in paragraph comprehension exceed those who make low scores only in the use of clauses associated with the complement and the subject.

SUMMARY

1. In oral language, all boys use more elaborated verb forms than girls do. The difference is most marked in Grade 4. In written language, only Caucasian boys of Grade 4 in the high quartile use more elaborated verb forms than girls do.

2. There has been little development, if any, in the use of elaborated verb forms between Grade 4 and Grade 6.

3. The only movables which are phrases that children of Grade 6 use more than children of Grade 4 do are the movables of manner and time. Negro children use slightly fewer of all types of movables that are phrases in their written language than Caucasian children of the same grade do, except the phrase to show the place of an action.

4. Children of this study use more clauses to express time than phrases to express time.

5. Children of Grade 6 use more clauses associated with the verb than children of Grade 4 do.

6. When children are classified by their scores on a test of verbal intelligence, the chief difference between the high and low quartiles in their use of clauses and phrases associated with the verb is that the high quartile uses more clauses or phrases to express time in written language.

7. There is little difference between children of Grade 4 and Grade 6 in the number of phrases and clauses used to amplify the subject and the complement.

8. Children use more phrases to elaborate the subject in their written language than they do in their oral language. This increase is most noticeable in the written language of Negro children. Also, in written language, all girls use more phrases in the subject slot than boys of the same grade do.

9. In written language Negro children use more phrases to elaborate the complement than Caucasian children of Grades 4 or 6, and Caucasian children of Grade 6 use fewer than Caucasian children of Grade 4.

10. There seems to be some relationship between use of clauses and phrases associated with the verb and the noun and the paragraph comprehension of children in Grade 4, but there is no clear dependence between the two in the language of children of Grade 6.

CHAPTER VII

Findings: Comparison of Children's Language and the Language of Their Textbooks

THE TEXTBOOKS

The language of six commonly used textbooks for Grade 4 and six for Grade 6 was used for comparison with the language of the children of this study. For Grade 4 the textbooks were Allyn and Bacon's _Believe and Make Believe_; Ginn's _Roads to Everywhere_; Lyons and Carnehan's _Meeting New Friends_ and the Classmate edition of it, called herein _Classmate_; and Scott, Foresman's _New Times and Places_ and _More Times and Places_. For Grade 6, the textbooks were Allyn and Bacon's _Arrivals and Departures_, Ginn's _Wings to Adventure_, Lyons and Carnehan's _Stories to Remember_ and the Classmate edition of it, and Scott, Foresman's _New People and Progress_ and _More People and Progress_. All of these textbooks were elaborately illustrated, even those of Grade 6, a device which may help to sell a book, but is certainly no aid in focusing children's attention upon the printed word. The eight pages chosen for analysis were distributed from front to back so that plans of the authors of the book for development in the use of language structures might be apparent if they existed. Since the total number of textbook pages for each of the two grades was 48, the textbook language sample was about half of that of the children's language sample for each grade. Though it would probably have been better to have had 100 pages of textbook language for each grade, the sample that was analyzed seems to have been adequate for giving as clear a picture of the textbook language as the system of analysis used permitted.

THE LANGUAGE

A tabulation of the first 22 ranking textbook structures reveals at once that the structure of dialogue predominates in textbook language. The combined use of the structure 421 ("Get into the house at once," warned Father.) and 412 ("Get into the house at once," Father said.) exceeds the use of 124 in the textbooks for Grade 4, and is only slightly less than the use of 124 in textbooks for Grade 6.

Children's Oral Language Structures Compared with Textbook Structures

In order to make any comparison at all between the structures of children's oral language and the language of their textbooks, the structures beginning with and had to be converted to structures not beginning with and. Since and at the beginning of numerous short phonological units in children's oral language is largely a holder to fill time while the child thinks of what to say next, addition of such structures as +124 and 124 to make the single structure 124 does not seem to be much of a violation of the true structural picture. After the conversion of plus structures there still remains in children's language an excessive number of T structures caused by their many communication units joined by and, but because some of these coordinations are true coordinations, and there are some T structures in the textbook language, no attempt has been made to break down these T structures.

Even after the conversion of the structures beginning with and, the difference between the structures used in the oral language of children and the structures used in their textbooks is so great that comparison between the two is principally a comparison of two definitely unlike things.

The ranking textbook structures comparatively unused by children of Grade 4 in their oral language are $124M_2$, $12M_3$, M_312b5, M_312, 12, 421, 412, $412M_2$, $412M_3$, M_2124, $12b5M_3$, 4123. It is perhaps worth noting that many of these structures contain the movable of manner, a movable which appears in only one ranking structure in children's oral language, $12M_2$. This structure

Table 66. ORAL LANGUAGE STRUCTURES OF CAUCASIAN AND NEGRO CHILDREN IN GRADE 4 COMPARED WITH THE LANGUAGE OF THEIR TEXTBOOKS

Structures*	Textbooks		Caucasian 4		Negro 4	
	Rank	f	Rank	f	Rank	f
124	1	96	1	432	1	421
421	2	69				
12b5	3	47	2	147	4	95
412	4	45				
M_3124	5	34	7	72	6	73
$12M_1$	6	33	4	95	2	149
$124M_2$	7	16				
M_312M_1	8	15	6	75	5	87
1234	9	14	16	14	11	44
124+T	10	12	5	87	4	89
$12M_2$	11	10	11	43	8	52
$124M_1$	12	9	10	45	13	34
$12M_3$	13	8				
T124	13	8	3	139	3	142
M_312b5	14	7				
M_312	14	7				
12	14	7				
$412M_2$	14	7				
$412M_3$	15	6				
4123	15	6				
M_2124	15	6				
$12b5M_3$	15	6				
2b1	15	6	15	23	14	23
T12b5	15	6	12	40	12	39
$12M_1$+T			8	55	7	71
$T12M_1$			9	46	10	50
T12			13	37	9	51
12b5+T			14	33	16	16
12+T			16	13	15	22

*Such structures as 124 and +124, $12M_1$ and +$12M_1$, etc. in children's language have been added and recorded simply as 124, $12M_1$, etc. The and (+) being treated as a holder in sentences beginning with and.

Table 67. ORAL LANGUAGE STRUCTURES OF CAUCASIAN CHILDREN IN GRADE 6 COMPARED WITH THE LANGUAGE OF THEIR TEXTBOOKS

Structures*	Textbooks		Caucasian 6	
	Rank	f	Rank	f
124	1	89	1	292
12b5	2	70	2	163
421	3	40		
412	4	34		
$M_3$124	5	26	6	75
12M_2	6	19	11	39
12M_1	7	18	4	95
124+T	8	16	5	92
124M_2	9	14		
$M_2$124	10	13		
12	11	11		
412M_2	11	11		
421M_2	12	10		
12b5+T	13	9	13	33
$M_3$12M_2	13	9		
2b1	14	8	14	23
T12b5	15	7	7	70
$M_2$12b5	15	7		
124M_4	15	7		
1234	15	7		
24	15	7		
124+24	16	6		
$M_3$12M_1			6	75
T124			3	147
124M_1			10	43
12M_1+T			8	65
T12M_1			9	59
T12			12	35

*Such structures as 124 and +124, 12M_1 and +12M_1, etc. in children's language have been added together and recorded simply as 124, 12M_1, etc., the and (+) being treated as a holder in sentences beginning with and.

$12M_2$, is of eleventh rank for both the textbooks of Grade 4 and Caucasian children of that grade. For Negro children of Grade 4 it is eighth in rank. Negro children are closer than Caucasian children to the textbook use of 1234. What is perhaps of greatest significance in this comparison is the children's dependence upon the simple 124 structure compared with the textbook use of 124. It is also significant that all the structures used by children but not used in their textbooks are T structures. Quite surprisingly, the textbooks use more unelaborated 12 structures than children do in their oral language when they are telling a story. If the language situation of this study had been a free conversational exchange that might not have been true.

Textbook structures not used to any extent by children of Grade 6 in their oral language are 421, 412, $124M_2$, M_2124, 12, $412M_2$, M_312b5, $124M_4$, 1234, 24, and 124+24. Again, the 12 structure stands out in textbook usage. There seems to be no reason for the frequent use of this structure except to produce some kind of variety of sentence length. Certainly it is used infrequently by children even in their written language. The textbooks inconsistently use it more at sixth-grade level than they do at fourth-grade level. Another of the textbook structures rarely used by children of Grade 6 is the conversational partial, 24. In the texts for Grade 6 there is less conversation than in textbooks for Grade 4 as is shown by there being only two ranking conversational structures of the 412 or 421 type as compared to four such structures of this type which rank high in fourth-grade texts. Significantly, most of the structures used in the texts for Grade 6, but not used to any extent by the children of that grade contain the movable of manner. In the textbooks there is one structure of high rank which uses the movable of cause, a movable used infrequently in children's language. Also textbooks use more co-ordination of the 124+24 type than children of Grade 6 do in their oral language.

Of the structures used by children of Grade 6 in their oral language, but not used to any extent in their textbooks, the chief are T structures as is the case in the language of children of Grade 4 when it is compared with the language of their textbooks. Two other structures used by children of Grade 6, but not used in their texts are $M_3 12M_1$ and $124M_1$. The first of these ($M_3 12M_1$) is used frequently in texts for Grade 4. The substitution of $M_3 12M_2$ for it in textbooks for Grade 6 seems an indication of an attempt on the part of the writers of textbooks to use more mature language through the substitution of the movable of manner for the movable of place. That the textbooks for Grade 6 do not use $124M_1$ to any extent may also be a sign of more mature use of language.

Children's Written Language Structures Compared with Textbook Structures

When the written language of children of Grade 4 is compared with the language of their textbooks, it is seen that certain structures used by the textbooks which did not appear as ranking structures of children's oral language do appear in children's written language. For children of Grade 4 these structures are 421, $124M_2$, $M_3 12b5$, and 12. The addition of the first three of these in quantity to children's written language is evidence of children's perception that writing is a different activity from speaking. The 421 probably shows that textbook structures can affect children's written language structures. That Negro children use 421 much more frequently than Caucasian children do may indicate a more serious attitude on their part toward school at this early period, or it may mean they are more imitative.

Of written forms used by children of Grade 4 which are not used to any extent by their textbooks, two are linking verb structures. Negro children

Table 68. LANGUAGE STRUCTURES IN TEXTBOOKS FOR GRADE 4 COMPARED WITH THE WRITTEN LANGUAGE STRUCTURES OF NEGRO AND CAUCASIAN CHILDREN OF GRADE 4

Structures	Textbooks		Negro 4		Caucasian 4	
	Rank	f	Rank	f	Rank	f
124	1	96	1	330	1	267
421	2	69	8	42	11	29
12b5	3	47	2	130	2	179
412	4	45				
M_1124	5	34	4	68	3	117
$12M_1$	6	33	3	94	4	65
$124M_1$	7	16	19	15	19	14
M_112M_1	8	15	10	31	6	53
1234	9	14	16	19	20	13
124+T	10	12	9	35	9	38
$12M_2$	11	10	7	43	7	40
$124M_1$	12	9	15	21	13	23
$12M_3$	13	8				
T124	13	8	5	50	8	31
M_112b5	14	7	20	14	20	13
M_112	14	7				
12	14	7	13	24	13	28
$412M_2$	14	7				
$412M_3$	15	6				
4123	15	6				
$12b5M_3$	15	6				
M_1124	15	6				
2b1			6	47	5	64
T12b5			15	21	10	36
$12bM_1$			12	29	13	25
$2b1M_1$			11	30	14	24
M_1124+T			17	17	19	14

Table 69. LANGUAGE STRUCTURES IN TEXTBOOKS FOR GRADE 6 COMPARED WITH THE WRITTEN LANGUAGE STRUCTURES OF CAUCASIAN CHILDREN OF GRADE 6

Structures	Textbooks		Caucasian 6	
	Rank	f	Rank	f
124	1	89	1	262
12h5	2	70	3	122
421	3	40	14	19
412	4	34		
$N_1$124	5	26	2	127
12N_2	6	19	8	30
12N_1	7	18	6	44
124-T	8	16	7	33
124N_2	9	14	21	11
$N_3$124	10	13		
12	11	11	18	14
412N_2	11	11		
421N_2	12	10		
12h5-T	13	9	15	18
$N_1$12N_2	13	9	10	26
251	14	8	12	22
T12h5	15	7	9	28
$N_3$12h5	15	7		
124N_4	15	7		
1234	15	7	17	13
24	15	7		
124-24	16	6		
$N_1$12N_3			4	64
T124			5	46
124N_3			14	19
$N_2$241			11	24
$N_1$12h5			13	21
$N_3$124-T			15	18

use a few more of these 12bM_1 and 2b1M_1 structures than Caucasian children do, but hardly enough to be significant, though the 2b1M_1 structure is of eleventh rank for Negro children and only fourteenth in rank for Caucasian children of Grade 4.

The 124 structure is used well over three times as much by Negro children of Grade 4 in their written language as it is in their textbooks, and nearly three times as much by Caucasian children. Children of Grade 4 also use the 12b5 structure about three times as much as their textbooks do. This excessive use of 124 and 12b5 without movables seems to indicate that children's written language is less mature than the language of their textbooks just as their less frequent use of the movable of manner (M_3) implies immaturity. Children's increased use of 12 structures in their written language when it is compared with their oral language is probably a matter of their shortening their communication units when faced with the difficult task of writing.

Ranking structures of the written language of children of Grade 6 which are not used in their oral language but are used in their textbooks are 421, 12, $M_3$12M_2 and 1234. None of these structures is used to any great extent except $M_3$12M_2. Children of Grade 6 use many more linking verb structures than their textbooks do, and many more simple 124 structures.

Movables Used by Children and Movables Used in Their Textbooks

Tables 68 and 69 show the average use of movables in the initial position in sentences written by children per child, and by textbooks per page. This ratio should give a slight advantage to the textbooks because most children did not write a page. The tables show that individual textbooks exhibit great variation in their use of movables in an initial position. In textbooks for Grade 4, the Scott, Foresman advanced text comes nearest to using the movable of place (M_1) initially the number of times children of Caucasian Grade 4 do, but the Classmate shows no use of the movable in this position. Negro children use this movable of place much less in an initial position than Caucasian children of Grade 4 do. Both Negro and Caucasian children use M_1 in the initial position more in written language than in oral, the difference in use for Caucasian children being nearly twice as much as in their oral language.

All textbooks, even the Lyons and Carnahan Classmate use the movable of manner in an initial position more than either Negro or Caucasian children of Grade 4 do. The Scott, Foresman, New Times and Places and the Classmate surpass children in the use of this movable of manner only slightly.

Caucasian children of Grade 4 use many more movables of time (M_3) at the beginning of structures than their textbooks do. Lyons and Carnahan's regular text for Grade 4 comes closest to children's usage, and is very nearly the same as the use by Negro children of Grade 4. Children use this structure in the initial position much more in their oral language than they do in their written language. With them M_3 in the initial position is likely to be the single word then.

The movable of cause or condition is used more in the initial position by all texts than by children of Grade 4 in their written language except by the Classmate. In their oral language, Caucasian children use the structure in an initial position more than three of the textbooks do, and nearly as much as any of them do. Negro children use it about the same number of times in their oral language as three of the textbooks do, but use it less than the Lyons and Carnahan regular text and the Ginn text.

As shown in Table 69, only the Allyn-Bacon text for Grade 6 uses M_1 in the initial position about the same number of times that pupils of Grade 6

Table 70. AVERAGE USE OF MOVABLES IN INITIAL POSITION PER CHILD IN LANGUAGE OF CHILDREN AND PER PAGE IN READING TEXTBOOKS FOR GRADE 4

Movables	Allyn & Bacon Believe & Make B.	Ginn Roads to Everywhere	Lyons & C Classmate	Lyons & C Meeting New Friends	Scott, Fores. New Times...	Scott, Fores. More Times...
M_1	0.50	0.50	0.00	0.25	0.12	0.62
M_2	1.00	0.87	0.37	0.50	0.36	1.25
M_3	2.12	1.75	1.62	2.37	1.62	2.50
M_4	0.12	0.25	0.00	0.25	0.12	0.12

	Children's Written Language Grade 4		Children's Oral Language Grade 4	
Movables	Caucasian 4	Negro 4	Caucasian 4	Negro 4
M_1	0.64	0.20	0.34	0.16
M_2	0.19	0.11	0.24	0.12
M_3	3.75	2.70	5.08	4.87
M_4	0.03	0.05	0.21	0.13

Table 71. AVERAGE USE OF MOVABLES IN INITIAL POSITION PER CHILD IN LANGUAGE OF CHILDREN AND PER PAGE IN READING TEXTBOOKS FOR GRADE 6

Movables	Allyn & Bacon Arrivals & Dept.	Ginn Wings to Adventure	Lyons & C. Classmate	Lyons & C. Stories to Remem.	Scott, Fores. New People...	Scott, Fores. More People...
M_1	0.62	0.50	0.25	0.75	0.00	0.50
M_2	1.50	0.87	0.50	1.25	1.12	1.62
M_3	2.12	2.50	1.50	2.62	1.25	3.00
M_4	0.37	0.25	0.00	0.00	0.62	0.12

Movables	Children's Language Grade 6 Written	Children's Language Grade 6 Oral
M_1	0.61	0.28
M_2	0.25	0.33
M_3	5.39	5.50
M_4	0.06	0.20

do in their written language. Lyons and Carnehan uses it slightly more than sixth-graders do, but not enough to be significant when it is considered that even at sixth-grade level all pupils did not write a page of language. Other than these two instances, children of Grade 6 use M_1 in an initial position more in their written language than any of their textbooks do. Children of Grade 6 use this movable in an initial position more in their written language than they do in their oral language, and the proportion of the increase of use in written language over use in oral language is greater than it is for Caucasian children of Grade 4.

Though Caucasian children of Grade 6 have increased their use of the movable of manner (M_2) in the initial position over the use of it by children of Grade 4, they do not use it anywhere near as much as their textbooks do, even the Classmate. They also do not use it as much in their written language as they do in their oral.

Children of Grade 6 have greatly increased their use of the movable of time (M_3) in the initial position over use of it by pupils of Grade 4, and like children of Grade 4, they use it far more than any of their textbook do. They use it about the same number of times in their oral language and their written language.

Even at sixth-grade level, children do not use the movable of cause or condition (M_4) much. All textbooks except the Lyons and Carnahan, both regular and Classmate use this movable in an initial position more than children do in their written language. Scott, Foresman's More People and Progress uses it less than children do in their oral language.

When movables are in other positions in the sentence than initial, there is more variation of use in the different textbooks than there is when movables are in an initial position. The textbook language which is nearest

Table 72. AVERAGE USE OF MOVABLES IN POSITIONS OTHER THAN INITIAL IN THE LANGUAGE OF CHILDREN PER CHILD AND PER PAGE IN READING TEXTBOOKS FOR GRADE 4

Movables	Allyn & Bacon Believe & Make B.	Ginn Roads to Everywhere	Lyons & C. Classmate	Lyons & C. Meeting New Friends	Scott, Fores. New Times...	Scott, Fores. More Times...
M_1	2.12	2.50	5.37	4.62	3.37	3.87
M_2	4.87	2.62	2.00	2.12	3.00	3.00
M_3	2.62	2.50	2.00	1.87	1.87	1.87
M_4	0.50	1.00	0.00	0.75	0.50	0.87
M_5	0.50	0.62	0.25	0.37	0.12	0.62

Movables	Children's Written Language Grade 4		Children's Oral Language Grade 4	
	Caucasian 4	Negro 4	Caucasian 4	Negro 4
M_1	4.38	5.21	8.24	7.94
M_2	2.28	2.27	4.09	3.14
M_3	.82	1.34	2.05	1.45
M_4	0.52	0.70	.97	1.07
M_5	0.06	0.06	.17	0.30

Table 73. AVERAGE USE OF MOVABLES IN POSITIONS OTHER THAN INITIAL IN THE LANGUAGE OF CHILDREN PER CHILD AND IN READING TEXTBOOKS PER PAGE FOR GRADE 6

Movables	Allyn & Bacon Arrivals & Dep.	Ginn Wings to Adventure	Lyons & C. Classmate	Lyons & C. Stories to Remem.	Scott, Fores. New People...	Scott, Fores. More People...
M_1	3.25	5.50	3.37	2.62	2.25	3.87
M_2	5.25	5.50	3.00	5.00	5.75	5.25
M_3	3.50	2.36	2.37	1.75	1.25	1.75
M_4	0.87	1.37	0.50	1.27	0.87	0.62
M_5	0.25	0.50	0.37	0.62	0.75	0.25

	Children's Language Grade 6	
Movables*	Written	Oral
M_1	4.65	9.50
M_2	3.06	4.63
M_3	1.04	2.53
M_4	1.16	1.12
M_5	0.09	0.29

to the written language of children of Grade 4 is that of the Lyons and Carnahan regular edition which uses movables in almost the same proportion as Negro children of Grade 4 do.

Except for the Lyons and Carnahan texts, the textbooks, in general, use fewer movables of place (M_1) in positions other than initial than children of Grade 4 do in either their written or their oral language, and more movables of manner (M_2) than children do in their written language. Caucasian children of Grade 4 use many more movables of manner in positions other than initial in their oral language than the textbooks do. While children of Grade 4 use many more movables of time (M_3) in an initial position than their textbooks do, their textbooks use more M_3's in other positions. Several of the textbooks use more movables of cause or condition (M_4) in medial and end positions than Caucasian children of Grade 4 do in their written language, but only two textbooks use more of this movable than Negro children do in written language. In their oral language, Negro children of Grade 4 use more of the movable M_4 in positions other than initial than any of the textbooks, and Caucasian children use more than any textbook except Ginn's which they nearly equal.

In their written language, children of Grade 4, both Negro and Caucasian use the inner complement with the preposition (M_5) less often than any of the textbooks do, but in their oral language they are close to the textbooks' use of this movable, especially Negro children who use this structure nearly twice as much as Caucasian children do.

In both written and oral language, children of Grade 6 use M_1 in all positions but the initial more than any of their textbooks do except Ginn. They use M_2 less than any except the Classmate in both written and oral language, and M_3 less than any except the Classmate in their written language, but more than any except Allyn and Bacon in their oral language. In both their written and oral language, they use M_4 more than Allyn and Bacon, the Classmate, and both Scott, Foresman textbooks. They use M_5 less than the textbooks do in their written language, but slightly more than Allyn and Bacon and one of the Scott, Foresman texts in their oral language.

Expansion of Verb and Noun in Children's Language and Their Textbooks

Children of both Grade 4 and Grade 6 expand the verb by using auxiliaries or by compounding it far more in their oral language than their textbooks do, but only Negro children expand the verb in their written language more than the textbooks do. In written language, Negro children use about one expanded verb per person more than the textbooks do, and Caucasian children of Grade 4 and Grade 6 use about one expanded verb less than their textbooks do.

In their written language, Negro children of Grade 4 use an average of two word clusters per child more than their textbooks do in the position of the subject, and Caucasian children of Grade 4 use slightly more than the textbooks do; but in their oral language, both Negro and Caucasian children of Grade 4 use fewer of these phrases than are used in their textbooks. Textbooks of Grade 4 use more clauses in the subject position than children of Grade 4 in their written language, though Negro children come close to textbook use. In their oral language, both Negro and Caucasian children of Grade 4 use more clauses than the textbooks do. Caucasian children of Grade 4 use more than twice as many. Caucasian children of Grade 6 only slightly exceed textbook use of clauses in the subject position in their oral language; and in their written language, use only a little over half as many clauses in this position as their textbooks do.

In both written and oral language, children of Grade 4 exceed textbook

Table 74. TOTAL AND AVERAGE FREQUENCY OF SELECTED VARIABLES AS USED PER CHILD AND PER PAGE IN THEIR TEXTBOOKS

Grade 4

Variables*	Negro 4 Oral		Negro 4 Written		Caucasian 4 Oral		Caucasian 4 Written		Textbooks Grade 4	
	(N=100)		(N=100)		(N=100)		(N=100)		(N=48)	
	f	Av.	f	Av.	f	Av.	f	Av.	f	Av.
(sg)	511	5.11	785	7.85	522	5.22	616	6.16	282	5.86
(ss)	22	0.22	16	0.16	51	0.51	8	0.08	9	0.18
v(sg)	903	9.03	686	6.86	1014	10.14	485	4.85	278	5.79
sg	1260	12.6	897	8.9	1168	11.7	734	7.3	292	6.1
ss	242	2.42	257	2.57	283	2.83	191	1.91	64	1.3

Grade 6

Variables*	Caucasian 6 Oral		Caucasian 6 Written		Textbooks Grade 6	
	(N=100)		(N=100)		(N=48)	
	f	Av.	f	Av.	f	Av.
(sg)	493	4.93	543	5.43	305	6.35
(ss)	54	0.54	29	0.29	22	0.45
v(sg)	1086	10.86	564	5.64	327	6.81
sg	1251	12.51	772	7.72	407	8.27
ss	297	2.97	296	2.96	247	5.14

*The meaning of the symbols is as follows: (1) Word groups related to the subject - (sg) a phrase; (ss) a clause. (2) Expansions of the verb - v(sg) verb phrase or compound verb. (3) Word groups related to the complement - sg, a phrase; ss, a clause.

use of a cluster of words (a phrase) in the complement. Negro children again exceed Caucasian children of Grade 4 in the use of phrases in the complement as they did in use of phrases in the subject position. Both Negro and Caucasian children of Grade 4 use many more clauses in the complement slot than their textbooks do. At the level of Grade 6, quite the contrary is true in use of phrases and clauses in the complement slot. Though children of Grade 6 use more phrases in the complement slot in their oral language than their textbooks do, in their written language they use fewer; and in both their written and oral language, they use just a little over half as many clauses in the complement position as their textbooks do.

Participles, Infinitives, Relatives As Used by Children and Their Textbooks

In order to analyse a little more deeply the kinds of phrases and clauses children use as compared with the ones in their textbooks, a count was made of what are commonly called participles, infinitives, and relative clauses. Participles were considered only when they introduced a group of words which was related to the subject, and when they were used with the verb as adverbs of manner. Relative clauses were divided into those introduced by _who_, _which_, or _that_.

Children of both Grade 4 and Grade 6 use more participles in their written language than they do in their oral language. The average use of participles by Caucasian children of Grade 4 in their written language is the same as that of two of their texts, fewer than that of three texts, and more than that of the _Classmate_. Negro children of Grade 4 use slightly fewer than two of the textbooks, considerably fewer than three, and more than the _Classmate_. All textbooks for Grade 6 use more participles than children of Grade 6 do except the _Classmate_.

Children of both Grade 4 and Grade 6 use many more infinitives in their

Table 75. TOTAL AND AVERAGE USE OF PARTICIPLES, INFINITIVES, AND RELATIVE CLAUSES IN THE LANGUAGE OF CHILDREN OF GRADE 4 AND IN THEIR TEXTBOOKS

Textbooks, Grade 4

Variables	Allyn & Bacon Believe & Make B.		Ginn Roads to Everywhere		Lyons & C. Meeting New Friends		Lyons & C. Classmate		Scott, Fores. New Times...		Scott, Fores.- More Times...	
	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.
Participles	12	1.50	10	1.25	10	1.25	2	0.25	13	1.62	12	1.50
Infinitives	22	2.75	27	3.37	22	2.75	10	1.25	24	3.00	24	3.00
Who	4	0.50	2	0.25	4	0.50	2	0.25	2	0.25	0	0.25
Which	2	0.25	0	0.00	1	0.12	0	0.00	1	0.12	0	0.00
That	0	0.00	3	0.37	4	0.50	1	0.12	1	0.12	0	0.00

Children's Language
Grade 4

Variables	Negro 4				Caucasian 4			
	Oral		Written		Oral		Written	
	f	Av.	f	Av.	f	Av.	f	Av.
Participles	115	1.15	121	1.21	103	1.03	125	1.25
Infinitives	406	4.06	274	2.74	375	3.75	195	1.95
Who	7	0.07	4	0.04	8	0.08	6	0.06
Which	1	0.01	2	0.02	0	0.00	1	0.01
That	27	0.27	16	0.16	104	1.04	18	0.18

Table 76. TOTAL AND AVERAGE USE OF PARTICIPLES, INFINITIVES, AND RELATIVE CLAUSES IN THE LANGUAGE OF CHILDREN OF GRADE 6 AND IN THEIR TEXTBOOKS

Textbooks, Grade 6

Variables	Allyn & Bacon Arrivals & Dep.		Ginn Wings to Adventure		Lyons & C., Stories to Remem.		Lyons & C., Classmate		Scott, Fores. New People...		Scott, Fores. More People...	
	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.	Tot.	Av.
Participles	14	1.75	25	3.12	18	2.25	6	0.75	16	2.00	24	3.00
Infinitives	42	5.25	35	4.37	35	4.37	23	2.87	26	3.25	25	3.12
Who	5	0.62	1	0.12	5	0.62	3	0.37	5	0.62	4	0.50
Which	6	0.75	3	0.37	6	0.75	1	0.12	1	0.12	0	0.00
That	0	0.00	2	0.25	4	0.50	4	0.50	5	0.62	3	0.37

Children's Language
Grade 6

Variables	Caucasian 6			
	Oral		Written	
	f	Av.	f	Av.
Participles	94	0.94	146	1.46
Infinitives	422	4.22	321	3.21
Who	10	0.10	13	0.13
Which	13	0.13	12	0.12
That	87	0.87	22	0.22

oral language than they do in their written language. Negro children of Grade 4 use more infinitives than Caucasian children of the same grade, in both written and oral language. In their written language, Negro children use the same average number of infinitives as two of their textbooks, fewer than three, and more than the *Classmate*. Caucasian children use fewer infinitives than any of the textbooks but the *Classmate*. One textbook for Grade 6 uses about the same average number of infinitives as children of Grade 6 do, two use fewer, and the other three use many more.

All textbooks for Grade 4 use more relative clauses beginning with *who* than children of Grade 4 do. Three of the textbooks for Grade 4 use no clauses beginning with *which*; the other three use many more than fourth-grade children do. Two textbooks for Grade 4 use no relative clauses beginning with *that*; two use fewer than children of Grade 4 do, and two use more.

All textbooks for Grade 6 use more relative clauses beginning with *who*, many more, except Ginn which uses about the same average number as children of Grade 6 do. Two textbooks use relative clauses beginning with *which* about the same as children do; one uses fewer; and three use many more. All textbooks for Grade 6 except Allyn and Bacon use more relative clauses beginning with *that* than children of Grade 6 do.

SUMMARY

1. Children use many more movables of place than their textbooks do, but fewer movables of manner. Though they use more movables of time in an initial position than their textbooks do, they use fewer in other positions.

2. In their oral language, children use more clauses and phrases in the subject and complement positions than their textbooks do, but in their written language they use fewer.

3. Though children use more infinitives in their oral language than their textbooks use, in their written language they use fewer. Participles and relative clauses are used far more by most textbooks

than they are used in either the written or oral language of children.

4. The language of Negro children of Grade 4 is nearer like that of their textbooks than the language of Caucasian children of Grade 4 is.

CONCLUSIONS

1. Children of Grade 4, even those whose scores on reading and mental maturity tests are relatively low, and whose families are of low socio-economic status, use all the basic language structures. In their oral language, almost without exception, they vary these structures extensively by more or less movable clauses and phrases. Most of them also show variation in the structures of their written language.

2. In an oral language situation in which the speech of children takes the form of an extended narration, children's language is characterized by many short phonological units beginning with *and* even by long phonological units, the parts of which are joined by *and*. This *and* in the short phonological units is not a conjunction in the ordinary sense. In short, it has the function of indicating that the author's thought is on the subject. It is a device for filling a time interval while the speaker is thinking of what he may next, and it is an additional signal. Thus it is not an ordinary coordinate conjunction to be replaced by the simple device of being completely eliminated nor by the period as [illegible].

3. Both the purpose which the language of children serves and the dialectal peculiarities of a particular region influence children's use of certain structures, so that no valid conclusion about the relative frequency of the use of any single structure can be drawn without consideration of these two factors. The [illegible] [illegible] structure [illegible] which other research has indicated is used more frequently in [illegible] of language was used most extensively in this study by children who [illegible]

CHAPTER VIII

Conclusions and Implications for Further Research

CONCLUSIONS

1. Children of Grade 4, even those whose scores on reading and mental maturity tests are relatively low, and whose families are of low socio-economic status, use all the basic language structures. In their oral language, almost without exception, they vary these structures extensively by more or less movable clauses and phrases. Most of them show variation in the structures of their written language.

2. In an oral language situation in which the speech of children takes the form of an extended narration, children's language is characterized by more short phonological units beginning with *and* than by long phonological units, the parts of which are joined by *and*. This *and* in the short phonological units is not a conjunction in the ordinary sense. Instead, it has the function of indicating that the entire monologue is on one subject; it is a device for filling a time interval while the speaker is thinking of what to say next; and it is an emotional crutch. That it is not an ordinary coordinate conjunction is betrayed by its always being completely enunciated and by its bearing an initial stress.

3. Both the purpose which the language of children serves and the dialectal peculiarities of a particular region influence children's use of certain structures, so that no valid conclusions about the maturity or immaturity of the use of any single structure can be drawn without consideration of these two factors. The linking verb structure (12b3) which other research has isolated as used more frequently by mature users of language was used most extensively in this study by children who could

do little but enumerate the different things seen in the picture which was the stimulus for story-telling.

4. Even as early as Grade 4, in narration, children use the chief structures of the English language proportionately in a way that approaches the use of them by adults who write non-fiction for books, magazines, and newspapers. Children's chief departures from adult use are an excess of subject-predicate-direct object (124) structures and fewer linking verb structures in both Grade 4 and Grade 6, and more structures beginning with an expletive in Grade 4. Use of many structures beginning with an expletive (2b1) is possibly a dialectal peculiarity of the region.

5. That children are aware of the part thought processes play in writing is evident in their use of structures in written language which they do not use to any extent in oral language.

6. Negro children are more fluent than Caucasian children of their own grade level, but they do not use the variety of language structures that Caucasian children do. In oral language, they enunciate less clearly and have many dialectal peculiartities. In writing, they fail to make many transformations of standard acceptability, especially in verb forms. In frequency of use of many structures, Negro children are closer to Caucasian children of Grade 6 than to Caucasian children of Grade 4. Their language tends to be bookish and wordy, as shown especially in their use of many phrases in the subject and complement slots.

7. Children of Grade 6 have made progress in enunciating more clearly than pupils of Grade 4 and in giving more significant intonation to their language. They write longer sentences, write more legibly, spell a little better, and recognize the end of a sentence better. That they have made some advance structurally is seen in the decrease of their use of the

unelaborated subject-predicate-direct object (12A) structure, and their use of any single structure over ten times, as well as in their increased use of the adverbs of manner. They use a greater variety of structures, but have added no single pattern of subordination or elaboration of basic structures which can be isolated as typical of the language of children of Grade 6.

8. Children of both Grade 4 and Grade 6 have developed a sense of organization in time. They show this in the frequency with which they use words, phrases, and clauses to indicate the time of an action in a language situation which is narrative. In fact, increased use of the adverbs of time is the most significant distinction between the language of children of Grade 6 and Grade 4, and between high and low quartiles when children are classified by their scores on a test of verbal intelligence.

9. For a small group of children, the average use of any one structure may be deceptive because individuals have a tendency to fall into excessive repetition of a single structure.

10. Children of rural communities write less, write shorter sentences, use language less dexterously, and make lower grades on reading tests than children of larger communities. When speaking, both Caucasian children of rural communities and Negro children of all types of community become less involved in mazes than Caucasian children of communities of over 5,000 population. This comparative freedom of rural children and Negroes from mazes may be a result of less self-criticism in language use.

11. The written language of the children of this study is inferior structurally to that of most of their textbooks, but not much. It is much more structurally varied than that of the textbooks designed for slow readers. Textbooks use almost all of the most-used language patterns of children's written language, and, in addition, use structures not commonly found in

children's language, especially the structures for dialogue. Textbooks use many more movables of manner than children do and more movables of time in positions other than initial.

None of the textbooks give attention to consistent development of sentence structure. Though in one textbook a single structure is repeated several times on a page, after this repetition, there is no attempt to continue using the structure. Sixth-grade textbooks do not use language in a way which is much superior structurally to the language of fourth-grade textbooks.

12. In their use of the [illegible] structure of dialogue there is evidence that children may be influenced by textbook language structures. Children of Grade 4 use this structure more than children of Grade 6, and Negro children use it more than Caucasian children of Grade 4.

13. Superior education of the mother seems to have some influence upon a child's superior use of movables at fourth-grade level, but not at sixth-grade level.

14. There is no well-defined dependence between father's occupation and a child's use of language structures, but all children whose families are supported by Welfare use language less well than children whose fathers are employed except Negro boys of Grade 4.

15. Children of both Grade 4 and Grade 6 who make high scores on a silent reading test of paragraph comprehension use more clauses in the subject and complement slots than children who make low scores.

16. Boys of the high quartile are generally superior to girls of the high quartile of the same grade in their use of language structures, but boys of the low quartile are inferior to girls of the low quartile. Boys of Grade 4 use more elaborated verb forms than girls of that grade do.

17. The differences between the oral language structures used by children in this study and those used by the children of the Strickland study are chiefly differences caused by the two language situations. In the free conversational interchange of the Strickland study, the children speak in long phonological units, the parts of which are joined by _and_. They speak many utterances and use many unelaborated noun-verb (12) structures. In a language situation that is quasi-monologue, the children of this study speak chiefly in short phonological units beginning with _and_, speak few utterances, and rarely use the unelaborated noun-verb structure.

IMPLICATIONS FOR FURTHER RESEARCH

The association between structure and purpose of language needs to be more thoroughly investigated. We need to know what is mature language for Grade 4, for Grade 5, for Grade 6, etc. We also need to know whether there are mandatory or almost mandatory structures for expressing certain ideas. To compare a narration on a subject like "Our Trip to the Mountains" written by pupils of Grade 4 with the discussion of a subject like "The Causes of the American Revolution" written by pupils of Grade 12, and then to conclude that the more frequent use of the structure 12b5 by pupils of Grade 12 is a sign of maturity in the use of language is hardly a valid conclusion. Though children of Grade 4 may not be able to write about the causes of the American Revolution, they can, after they have been adequately prepared for it by a lesson in science or health, write on the subject, "Why People Cook Their Food." A whole series of themes written for different purposes, the same series for each grade of the elementary school, might come nearer to uncovering differences in use of structures at various grade levels than past research has done. This series could also be designed to disclose differences between mature and immature writers in each grade and to disclose possible associations between the structure of language and the purpose of language.

A second type of research for which there is a need is an investigation of the relation between fluency in use of language and the degree of self-criticism children have developed. Verbosity without regard for sense is one of the characteristics of the language of Negroes which causes Negro students to fail when they compete with Caucasian students at college level.

A third type of research needed is the setting up of pilot studies to see what improvement in children's language could be made if the child's school day included frequent writing, if only a single sentence in length, in science, arithmetic, and geography classes as well as in language class. Much of the writing in arithmetic could be of the How to.. type, an explanation, for instance, of how the child performs an operation like division.

A fourth type of research needed is a thorough examination of language and reading textbooks for children. All exercises should be evaluated for the number of language experiences they provide for both the accelerated child and the slow child. All stories should be evaluated for subject matter as well as language.

Finally, it might be interesting to see whether children developed faster in their use of language if, after the third grade, their reading textbooks were filled with reading matter instead of pictures.

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